

# THE *Soybean* *Digest*

**Forecasting  
Soybean Yields  
A Year In  
Advance**

**By Louis Bean**

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**DECEMBER • 1961**

**VOLUME 22 • NUMBER 2**



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# THE Soybean Digest

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Soybean Council of America, Inc.

HUDSON, IOWA

Vol. 22 December, 1961 No. 2

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## THE SOYBEAN DIGEST

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Objectives of the American Soybean Association include the bringing together of all persons interested in the production, distribution and utilization of soybeans; the collection and dissemination of the best available information relating to both the practical and scientific phases of the problems of increased yields coupled with lessened costs; the safeguarding of production against diseases and insect pests; the promotion of the development of new varieties; the encouragement of the interest of federal and state governments and experiment stations; and the rendering of all possible services to the members of the Association.





## EDITOR'S DESK

... By GEO. M. STRAYER

### TURKEY DECISION IS BASIC

The hearings currently being held pertaining to marketing orders on turkeys have far greater significance than to turkey producers alone. They are the entering wedge to a regimented agriculture. Seemingly harmless in themselves, they will establish whether or not there will be a referendum of turkey producers. Should the referendum carry, the first nationwide marketing order would be invoked. That would be only the beginning.

Certainly no turkey producer likes low prices for his product! No more than does a soybean producer. Certainly no turkey producer likes to lose \$1 per bird. But turkey producers were warned last spring that this very thing was going to happen to them. Each expected the other fellow to cut back on production. When you have too much of a product you have price depression. It now prevails in turkeys. But it is nothing a smaller turkey crop would not soon cure!

A nationwide marketing order would mean control of the turkey hatch and marketing by the federal government. It would mean bureaucratic procedures far beyond anything you have yet seen. It would be followed by similar programs on broilers and a host of other commodities. The share of the market supplied by producers of those commodities must of necessity shrink. High priced turkey induced by a marketing order program will limit the market for turkey meat just exactly like high priced turkey induced by any other cause. Beef, pork, lamb, chicken and other meats take over the market.

A federal marketing order on turkeys would limit the market for soybean meal for turkey feeding. But of far greater importance would be the pattern established and gradually forced on other commodities—that of going to the Great White Father in Washington to do the things we should do ourselves!

Really, is there anything so impossible about adjusting turkey production? Or about adjusting soybean production either? Intelligent men in any commodity can solve their own problems if they will.

### DON'T HOLD SOYBEANS TOO LONG

Remembering the high soybean prices of last April and responding to the admonitions of USDA, farmers have placed more soybeans in storage on farms and at country points than ever before in history. Processors own about enough soybeans to operate their plants for 2 months. The rest of the year's crush will have to come from farm and elevator stocks.

An orderly marketing system, with soybeans flowing to market throughout the year, is desirable. It is the only way to obtain maximum returns.

But let's not get our industry into the pattern of producing for storage and not for consumption! Let's not do anything more to bring on ourselves the problems of surplus commodities—wheat, corn, grain sorghums, cotton—by holding soybeans off the market until they pile up in surplus.

In September of 1960 you could look at consumption and production figures and at price and almost predict what was going to happen. Demand was good because of price, production was low. This year we have exactly the opposite situation. Everybody is holding soybeans. Usually that is a good time to sell.

### SHOULD CCC STOCKPILE SOYBEAN OIL?

CCC stockpiling of oil, after the experiences with cottonseed oil a few years back, is not a popular subject. Oil placed in stockpile still hangs over the market, depresses price on all other supplies.

But it is not too early to give some consideration to the desirability of such a move on soybean oil. Oil stocks are very high. There appears to be little to encourage price rises. Soybean meal prices must be high to justify the purchase of beans at loan levels. Turkey, broiler, egg and pork prices are at low levels. This is not conducive to consumption of relatively high priced soybean meal.

If soybeans are to be crushed in quantity—if meal is to be priced where it will move in quantity, then oil must move out of processor stocks. Where will it move? Perhaps CCC stockpiling, coupled with a reduction in soybean acreage for 1962, does offer possibilities.

*From All of Us on the ASA Staff to All of You—*

*Our Readers—We Extend*

*The Heartiest of Holiday Greetings*



## Lyle Trisler of Illinois



Lyle Trisler

LYLE TRISLER, Trisler Seed Farms, Fairmount, Ill., was elected a director from Illinois of the American Soybean Association, at the annual convention in Memphis last August.

Mr. Trisler has both extensive farming and seed operations. He started his seed business on 1 acre in 1937. By 1961 he had 12 full-time employees and was merchandising the seed from 500 acres of corn and 5,000 acres of soybeans, wheat and oats.

Mr. Trisler started farming in partnership with his father in 1936. He has an 830-acre grain farm with limited livestock. He uses an intensive grain rotation employing fertilizer liberally with 350 to 400 acres of corn, 150 acres of soybeans, 100 acres of wheat, 80 acres of oats, and 60 acres of rotation pasture. He employs four farmhands.

Mr. Trisler is a graduate of Fairmount High School and of the University of Illinois (1935) with a B. S. in agriculture. He was on the board of the Illinois Crop Improvement Association for 8 years, and a member of the agronomy advisory committee of the University of Illinois for 3 years. He is a member of Gamma Sigma Delta honor society for service to agriculture.

Mr. Trisler also has been extremely active in community affairs. He brought the electric line to the community in 1938. He has been active in the Vermilion County Fair and in Boy Scouts of the Little Vermilion district. He is a member of the Methodist Church, has been a member of the church board and has conducted the church's finance drives.

He had 19 years' tenure as a member of the local school board, most of the time as president, and assisted

in the consolidation of three districts to form Jamaica Community High School.

Mr. Trisler holds a medical discharge from the U. S. Army in 1940 as a first lieutenant.

He is married to the former Blanche Landman, has one son and three daughters living. One son was a victim of polio in 1952.

## Likes Soybean Digest And Editorial Page

TO THE EDITOR: As the manager of a company with diversified interests, I have the opportunity to compare the merits of several trade associations, and frankly, the ASA and its informant, the Soybean Digest, are among the very best. I look forward to your editorial page each month and compliment you on your concise presentations of the soybean situation.

We produce approximately 100,000 bushels of beans annually.—J. G. Ralston, Deltic Farm & Timber Co., Inc., El Dorado, Ark.



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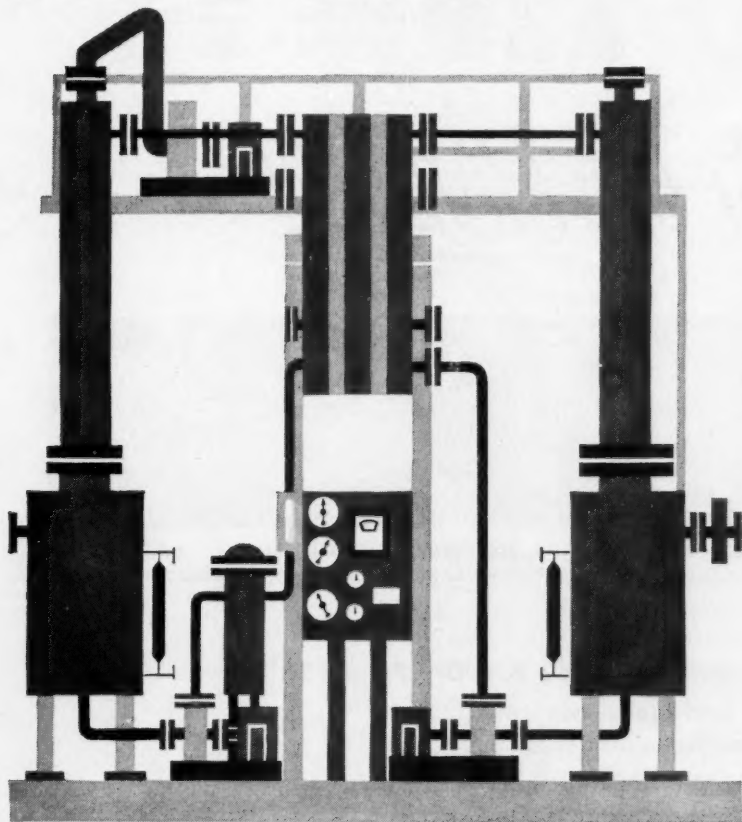
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## THE NEWS IN BRIEF

### THE CROP, MARKETS AND OTHER ITEMS OF NOTE

#### Brewster on Next Year's Outlook

A carryover of soybeans next Oct. 1 of 106.8 million bushels compared with the 75 million bushels seen by U. S. Department of Agriculture was predicted by L. R. Brewster, operations control, General Mills, Inc., in his late November soybean meal market letter. Mr. Brewster expects soybean processing for the 1961-62 market year ending next Sept. 30 to total 410 million bushels, exports to total 150 million bushels for a total consumption of 600 million bushels out of a total supply of 706.8 million bushels.

Quoting Mr. Brewster: "I believe there are too many barriers . . . to an annual crush of more than 410 million bushels—such things as record low prices for broilers and turkeys, somewhat lower hog prices and higher soybean meal prices than were anticipated . . . The tendency on the part of the farmer to hold his soybeans off the market is forcing this issue already.

"To attain a 410-million-bushel crush . . . assuming a 24-million-bushel crush next September, plants will have to operate at a monthly rate of 35.1 million bushels for the other 11 months—this compares to a 34.3-million-bushel average crush during the past crop year." (The soybean crush in October was 36.1 million bushels, according to the U. S. Bureau of the Census.)

Mr. Brewster comments further on the price outlook: "With the record 1961 soybean crop out of the field and under cover, it is doubtful we will see any lower soybean prices. With no appreciable increase in crush this year, soybean meal supplies will not likely be large enough to lower meal prices to the extent it was earlier anticipated . . . We are beginning the crop year with a record oil inventory and export sales are slow in coming—this, to me, points to a rather static market for soybean meal and oil in the months ahead."

And acting U. S. Secretary of Agriculture Charles S. Murphy has called the anticipated carryover of soybeans next year "desirable." He said expressed concern about the record-breaking soybean crop this year is not shared by USDA. (For further comment on the outlook see report on page 16 and Washington Digest, page 30.)

#### Food for Peace Program

Progress "toward finding a way to add protein to U. S. . . wheat stocks to help meet the critical needs of hungry peoples" was reported by George McGovern, Food for Peace director, in a speech before the Chicago Board of Trade in late November.

One basic problem, Mr. McGovern said, is the fact that the world's most critical food deficiency is protein, whereas America's chief food surplus is wheat which is not a high protein food. A proposal includes adding 5 pounds of soy flour and a small amount of lysine acid to each 100 pounds of wheat flour, tripling the protein usefulness of the flour, Mr. McGovern, who is a special assistant to President Kennedy, said. He said it would add only 10% to the cost of ordinary flour.

#### Reports on Fats, Oils Exports

U. S. exports of soybeans and soybean oil have been running below last year's level (down almost one-third during January-August), USDA reports. Exports in the last quarter of the year should pick up with abundant supplies of new-crop soybeans coming on the market and with large quantities of oil expected to move, but the total for calendar 1961 is unlikely to reach last year's level, according to USDA.

The spectacular rise in exports of soybeans and soybean oil, due almost entirely to rapid U. S. expansion, has highlighted the world's fats and oils trade for the past 2 decades, USDA notes. For the eighth successive year, world exports of soybeans and soybean oil set a new record in 1960, reaching 1.6 million tons, oil equivalent basis, or virtually four times the 1950-54

average. This year soybeans and soybean oil are maintaining first place in world trade but volume may be as much as 10% below the 1960 record.

On a fiscal year basis, soybean exports for the year 1961-62 through next June 30 are likely to be 10% above the record level of 143 million bushels last year, USDA states. Relatively small exports of soybeans from Communist China will again contribute to the excellent foreign demand for U. S. beans.

**Exports of U. S. vegetable oils during all of fiscal year 1961-62 (through next June) will probably be somewhat higher than in the past year, primarily because of smaller olive crops in the key countries of Spain and Italy and increased programming to countries such as Pakistan and Turkey.**

Japanese firms as of Nov. 28 had contracted for 1.7 million bushels of soybeans from Mainland China for delivery between now and January, according to reports from Japan. This compares with a total of 663,000 bushels of Chinese soybeans imported by Japan for the whole 1960-61 marketing year which ended Oct. 1. Japan was not buying any Chinese soybeans a year ago, but resumed trading last spring.

### **Strong Holding Movement**

Our November reports all confirmed strong holding of 1961-crop soybeans on the part of farmers. In nearly all areas, particularly the South, they are storing more soybeans than they did last year. There was some late November movement in parts of the belt, and processors were able to buy some beans, though the supply of some processors was not great. Nationally processors held about 2 months supply as of Nov. 1.

A total of 16 million bushels of 1961-crop soybeans were placed under price support as of Oct. 31 compared with 3.6 million on Oct. 31, 1960, according to USDA. Heaviest storage is in Minnesota, Illinois, Iowa, and Missouri, with substantial amounts also being stored in Ohio and Arkansas.

### **Some Late Reports on Crop**

There were still a few fields of soybeans to be harvested in late November in a number of northern states including Illinois, Iowa, Indiana, Kansas and Missouri, and there was a small volume of beans still in the field in the south. But harvest was approaching the end everywhere, mainly waiting for favorable weather to complete.

USDA reported that late-harvested soybeans from northern fields have been high in moisture. R. A. Fisher, Gibbs & Harris Rice Drier, Inc., Wynne, Ark., says soybeans in the area will be lower grade due to recent unfavorable harvesting weather. But quality of the 1961 crop has in general been quite high, at least equal to last year. Dixon Jordan, Standard Commission Co., Memphis, Tenn., calls the crop "the best for storing we have ever seen."

USDA began a new survey of storage costs Nov. 27 to see if changes have occurred since the survey of 2 years ago. The final analysis to be completed in late December will be used by the Department in negotiating any reexamination of rates under the uniform grain storage agreement. The same questionnaire as 2 years ago is being used with minor changes. Some 100 warehousing firms are being surveyed on a sampling basis to represent all areas and types of storage facilities. (For further comment see Washington Digest page 30.)

Oilseed meals available for feeding to livestock in the 1961-62 feeding year will total 13,570,000 tons compared to 12,127,000 tons fed last year, according to the feed survey committee of the American Feed Manufacturers Association. Estimated high protein feed supplies exceed anticipated feed use by 6% and last year's actual feed use by 9%.

Some Arkansas buyers have been mistaking velvet leaf weed seed in lots of soybeans for crotalaria and have been refusing to buy the soybeans, reports Ruel P. Nester, extension agronomist, Little Rock. A program is being carried on in Arkansas to familiarize growers and buyers with crotalaria seed, which is toxic when fed to livestock.



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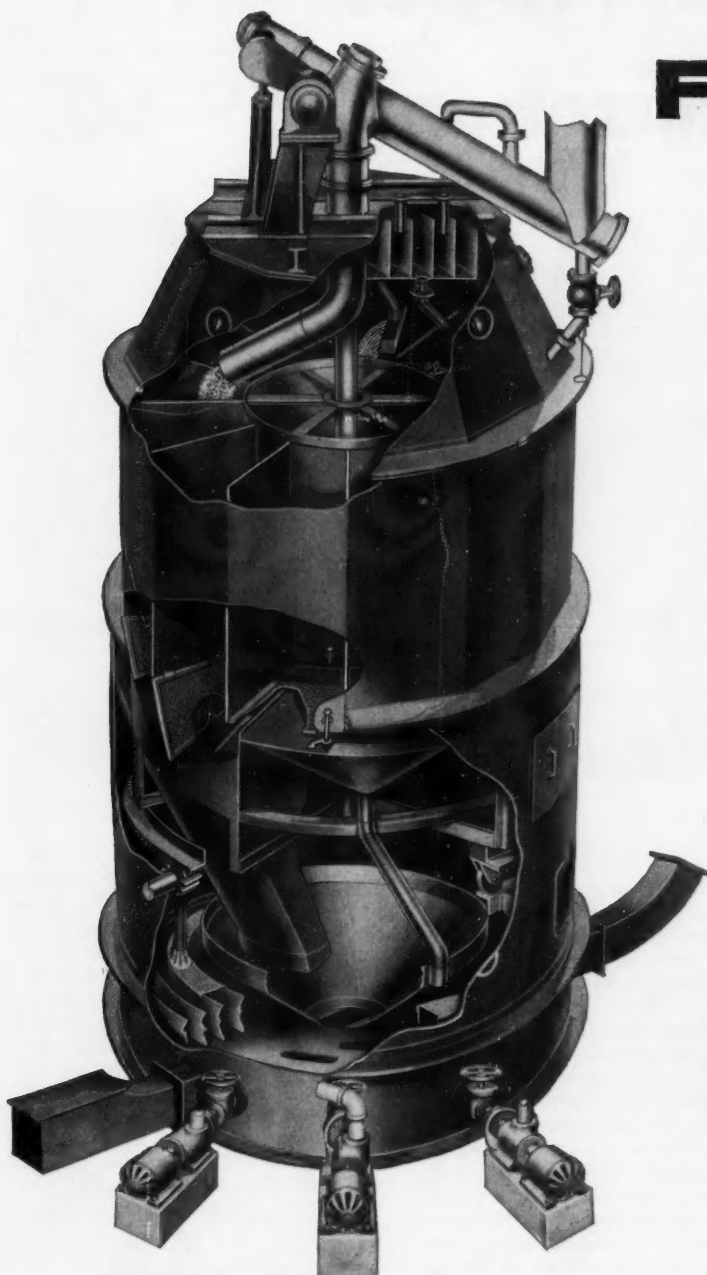
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DECEMBER, 1961

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# Research Progress in Soybean Utilization 1959-60\*

By J. C. COWAN and  
W. C. WITHAM

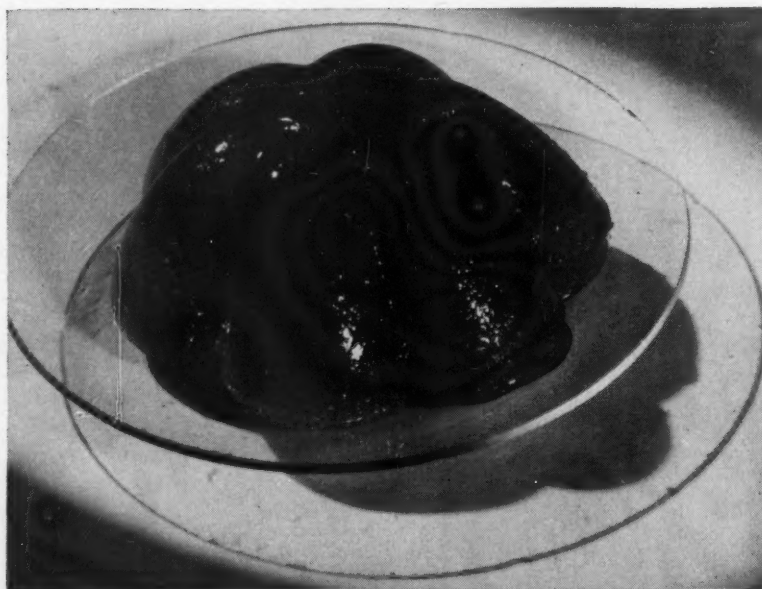
Northern Regional Research Laboratory,\*\*  
Peoria, Ill.

**L**ARGE AMOUNTS of soybean products are consumed in the United States and in foreign countries for a variety of uses. Soybeans supply high-quality feed and edible products to the livestock and food industries. With this favorable position, the future of soybeans seems assured. Over the last 5 years an average of more than a half-billion bushels has been produced each year, with over 700 million bushels predicted for the last season. Research is needed to retain and enhance soybeans' present eminence by finding improvements in the quality of products and by developing new products.

The research program at the Northern Regional Research Laboratory is conceived to gain needed information to increase the industrial, feed, and food uses of soybeans and their derived products—oil and meal. We seek to discover methods of improving flavor stability in soybean cooking oil; to develop new industrial products for nonfood uses from both the oil and meal; to find ways and means of improving the quality of soybean meal and flour, and new products therefrom; and to supply new, basic, scientific information that will increase the use of U. S. soybeans in foreign markets.

Specifically, our program is designed to provide new fundamental information on the components of soybeans, on the chemistry of autoxidation and selective hydrogenation of edible oil derived from soybeans, on chemical modification of both oil and meal, and on methods of increasing the utility of soybean products for human foods at home and abroad.

\* Presented in part at American Soybean Association conventions in Memphis, Tenn., Aug. 22, 1960, and Indianapolis, Ind., Aug. 28, 1961.  
\*\* This is a laboratory of the Northern Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture, Peoria, Ill.



GELLED PRODUCT made with soybean protein.

## Flavor Stability—Autoxidation

Previous research at the Northern Laboratory, and elsewhere, has established that oxidation is a primary reaction involved in the development of off-flavors in edible oils such as soybean oil. Since the linolenic ester has been established as a major precursor of the off-flavors in soybean oil, we have in the past studied its oxidation. Recently perfected methods of recovering and identifying materials indicated that we should reinvestigate the components of autoxidation—both the products formed in the first steps of autoxidation, as well as the products formed in oxidative cleavage reactions. More knowledge of the initial step in autoxidation might tell us how to retard it.

Likewise, more knowledge of the oxidative cleavage products, or flavor components, might give us new information regarding other precursors besides linolenic acid. We shall review briefly (a) new work on the initial product of autoxidizing linolenic ester, (b) a method of measuring polymeric products, and (c) some of our latest work on the identity of volatile flavors.

**Linolenic Hydroperoxide.** Linolenic acid reacts with oxygen on exposure

to air to form a reactive hydroperoxide that is chemically similar to hydrogen peroxide (bleach). This finding (1) confirms previous work elsewhere (2). This hydroperoxide decomposes on heating to give low-boiling oxidative-cleavage products (odors and flavors) and high-boiling dimeric and polymeric products that are detrimental to the stability of soybean oil (3). The hydroperoxides can be reduced to the hydroxy derivative of linolenate, and we have studied some reactions of this product. It loses water to give a highly reactive tetraene. These reactions of linolenic acid are summarized in figure 1.

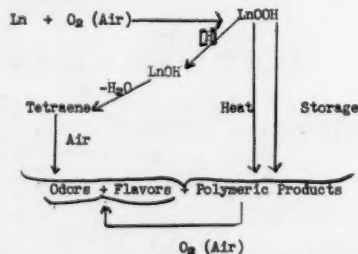


Fig. 1. Reaction of linolenic acid (Ln) with air (oxygen) to give linolenate hydroperoxide (LnOOH), and reduced to hydroxy linolenate (LnOH).

Since the tetraene and the dimeric and polymeric products oxidize readily, their reactions lower stability in soybean oil. In the process of making a salad oil, hydroperoxides are usually present in small amounts after the bleaching step. When the oil is heated during the deodorization, this hydroperoxide decomposes to create dimeric and polymeric products that lower stability. These findings suggest that it might be better to reduce hydroperoxides rather than to decompose them by heat. This reduction should be carried out before deodorization and heating of the oil for catalytic hydrogenation. Such reduction lowers the amount of pro-oxidants and polymeric products in soybean oil.

**Method for Dimer Content.** Two years ago, we reported that auto-oxidation of soybean oil gave hydroperoxides which decompose to give polymeric products (14). Although processing the soybean oil destroys peroxides, residual polymeric products remain in the oil. They make the oil more unstable, and some samples that have been mistreated occasionally find their way into commercial channels with a resulting lowering of quality of a portion of the edible oils.

To determine the amounts of these detrimental polymeric products readily, we have looked for and found a special method (4). It uses silicic acid (water glass precipitated with acid) to form a chromatographic column that permits separation of dimeric and polymeric acids readily from monomer. Once a separation of these acids is obtained, a measure of their acidity by titration with alcoholic potassium hydroxide gives us an analysis of the dimeric plus polymeric content. Using this procedure, we found that commercial soybean oils contained from 1% to 3% of these products. Other edible oils also contain these materials. Incidentally, this general procedure is proving to be valuable in other analyses.

Figure 2 shows the amounts of dimer and secondary products formed when soybean oil is autooxidized to different levels of peroxide value. This method has been furnished for use in

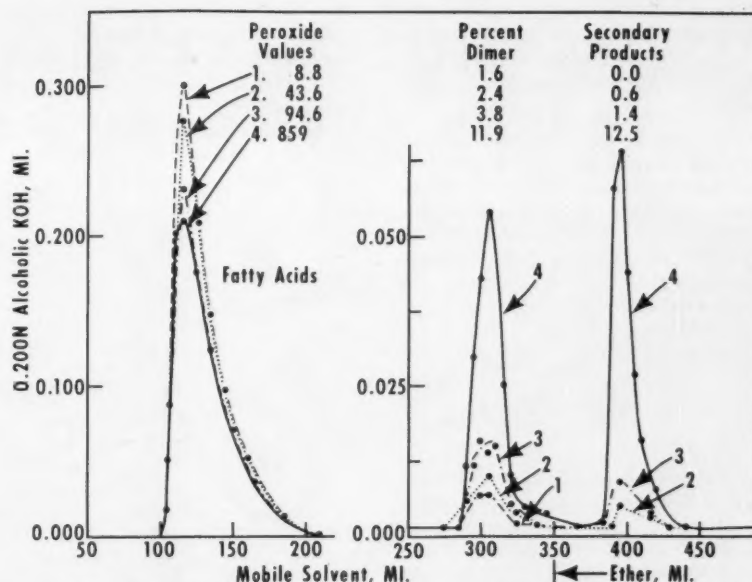


Fig. 2. Chromatographic separation of dimers from fatty acids in oxidized-deodorized soybean oil.

the fats and oil industry. We hope that its application will improve the quality of soybean oils offered for use in foods.

**Oxidative Cleavage Products—Flavors.** All edible oils undergo chemical changes when they are used for either salads or cooking. These changes are usually called autooxidation. Soybean oil undergoes some of the same changes as occur in other edible oils, such as corn, cottonseed, or peanut. However, refined, bleached, and deodorized soybean oil undergoes additional changes. Thus, these other oils usually command a premium over soybean oil if it is to be for use in salad and cooking oils. Soybean oil finds extensive use in salad dressings, but limited use as a cooking oil unless hydrogenated.

Now, the differences in flavors produced on heating soybean and some of these other oils can be recognized by experts in the food industry. Recently developed tools of gas chromatography coupled with mass, infrared, and ultraviolet spectroscopy permit us to detect unknown flavors more readily. Let us compare two

chromatographs, one of soybean oil (A) (figure 3), and the other of a nonlinolenic acid oil (B) (figure 4).

Note that (B) has fewer volatile products. These studies have shown that hydrocarbons, alcohols, aldehydes, and aldehyde esters are products of autooxidation (5).

**Flavor Stability—Hydrogenation.** One accepted method for improving the flavor stability of soybean oil is hydrogenation. Hydrogenated oil gives good shortening and margarine. Over 2 billion pounds of soybean oil are used in these foods yearly. Proper application of hydrogenation to soybean oil should give an improved oil for use both as a salad and as a cooking oil. Since our research has established that linolenic acid is a primary factor in the flavor stability of soybean oil, the removal of this acid should substantially improve the oil's stability. In our studies on hydrogenation we believe the ideal solution would be to make a salad and cooking oil that has no linolenic acid left in it without destroying any linoleic acid, an essential fatty acid. As far as we know, industry has not been able to achieve

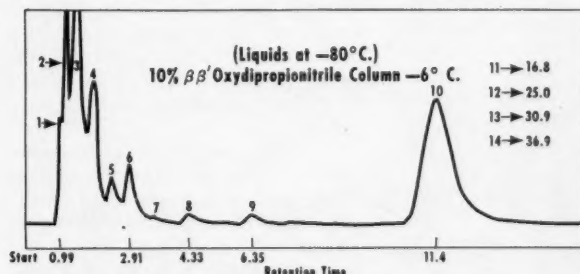


Fig. 3. Gas chromatogram of highly volatile oxidation products from soybean oil.

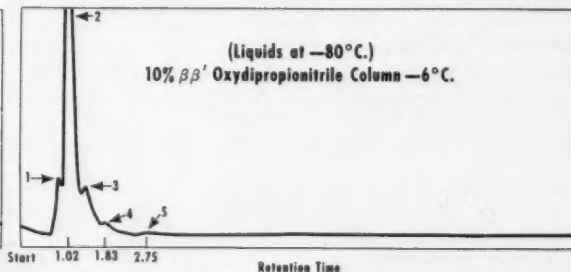


Fig. 4. Gas chromatogram of highly volatile oxidation products of a nonlinolenic acid oil.



this goal. Consequently, we have undertaken fundamental investigations designed to gain a better understanding about the hydrogenation of soybean oil.

One area of our research has been directed toward the use of catalysts for the selective hydrogenation of soybean oil. This work has included studies on products formed by hydrogenation of the main components of soybean, such as linolenic acid; kinetics of the hydrogenation of a mixture of linolenic and linoleic esters (components of soybean oil); and catalysts that will hydrogenate soybean oil to remove linolenic ester without forming saturated or *trans*-isomeric acids (solid acids).

We have found that chemical reduction (6) using hydrazine ( $\text{NH}_2\text{NH}_2$ ), a missile fuel, does hydrogenate linolenic acid to give some linoleic without forming *trans* isomers; this discovery represents a significant step forward. Although saturated fatty acids were formed in the reduction and although hydrazine is now very expensive, this method needs to be investigated further because of the lack of *trans*-isomeric acids in the product.

Also, the use of hydrazine has permitted us to prepare new derivatives of fatty acids not readily available previously. These new derivatives may assist us in our basic studies on the flavor stability of soybean oil, as well as in other problems. Recently, substantial reductions in hydrazine prices were predicted since its use is increasing as a liquid propellant for rockets and missiles (7).

Figure 5 summarizes our work on hydrogenation. Linolenic acid when reduced with hydrazine gives linoleic acid and a comparatively simple mixture of other products, i.e., four other unsaturated products and no higher melting *trans* isomers. Catalytic hydrogenation employs a catalyst, such as finely divided nickel (Ni) and hydrogen ( $\text{H}_2$ ). Under conditions comparable to what might be practiced for "selectivity" in some commercial plants, linolenic acid on catalytic hydrogenation would give at least 13 or more products with a high percentage of them in a *trans* configuration that raises their melting point (8).

Our work is continuing on hydrogenation with hydrazine; with catalysts that are now available; and with new catalysts being synthesized. We

are also searching for catalysts that will hydrogenate without forming *trans* isomers or stearic acid and that form linoleic (essential fatty acid) from linolenic acid.

**Soybean Unsaponifiables.** About a year ago, the Soybean Council of America gave us a grant to carry out research on the minor nonglyceride components of soybean oil. A number of investigators believe that some other factor(s) besides linolenic acids and metals, which are pro-oxidant for linolenic acid, are of importance in the flavors and flavor stability of soybean oil. After a recommendation of the Soybean Research Council of the National Soybean Processors Association, and the grant from the Soybean Council of America, we undertook work on one part of these minor components, the unsaponifiables. The technical details of this work were reported by Richard L. Hoffmann (9) at the 35th fall meeting of the American Oil Chemists' Society in Chicago, Oct. 30-Nov. 1, 1961.

We have examined over 10 different soybean oil samples for these unsaponifiables and have prepared them in 3 different ways. One way appeared not to change these unsaponifiables and permitted us to add them to cottonseed oil. The unsaponifiables lowered the flavor and flavor stability of cottonseed oil. Further work is in progress, and it will be reported later in more detail.

#### Investigations on Meal

During the past year, we have continued our work on studies that would increase our knowledge of the composition of soybean meal. A better understanding of the nutritional factors and the minor constituents in soybean meal is needed if we are to increase its feed, food, and industrial value.

One essential constituent of meal for feed use is the "protein." As is well known, meal is sold on the basis of protein content. Sometime ago, the amino acid content of soybean meal and some of its fractions was determined (10). Since then, methods of analyses have improved considerably; consequently, we decided to take another careful look at the essential amino acid content of several fractions of Hawkeye beans. These studies showed us that the essential amino acids are higher in some fractions than in others (11). For example, the acid-precipitated protein, which is the

major protein component, is not as rich in many of the essential amino acids as are the minor fractions, such as the residue from protein extraction or the proteins (whey) that fail to precipitate with acid.

Also, one amino acid, hydroxy proline, not previously reported in soybeans was discovered in the seedcoat in appreciable amounts. The accompanying table shows amounts of some essential amino acids in whole meal and indicates by a plus or minus sign which ones are higher or lower in acid-precipitated protein (commercial food-grade soy protein) extracted from the meal; in the residue or insoluble protein; and in the whey or soluble protein from extracting and acid-precipitating procedures.

This basic information may permit a more logical approach to increasing the essential amino acid content of soybeans and soybean meal, or it may suggest new areas for additional research on the use of individual components.

#### SOME ESSENTIAL AMINO ACID CONTENTS OF SOYBEAN MEAL

	Meal	Protein (Acid-Ppt.)	Residue	Whey
Threonine	4.3	—	+	†
Valine	5.4	—	†	+
Cystine	1.6	—	—	†
Methionine	1.6	—	+	†
Leucine	7.7	+	+	—
Lysine	6.9	—	+	†
Tryptophane	1.3	—	+	—

Values given in grams of amino acid per 16 grams of nitrogen. A dagger sign indicates that more than 20% increase over the value in the whole meal was found in the residue or whey. If cystine-methionine or lysine were increased in soybean meal, it would be still more valuable as a feed. The plus signs indicate increases in amino acids whose content in the meal limit its feed utility.

**Foams and Gels from Protein.** Soybean protein isolated by acidification of an aqueous extract of defatted soybean meal contains phospholipid-like material. Purified laboratory preparations of the protein contain about 2% of this lipid which is concentrated in a fraction of the acid-precipitated protein and which cannot be removed either by isoelectric precipitation and washing, dialysis, or ammonium sulfate precipitation. However, the impurity is extractable with aqueous alcohols. The concentration of alcohol used to wash the protein has a pronounced effect on the amount of material removed and on the nitrogen content of the extracted protein. Optimum concentrations of alcohol are: methyl 95% (v/v), ethyl 75-86% (v/v), and *iso*-propyl 50-85% (v/v) (12).

The extracted protein produces extremely stable, low density foams and whips similar to some commercially available soy products. On heating and cooling, a gel product is formed that is heat-reversible and has some properties similar to gelatin.

(Continued on Page 16)

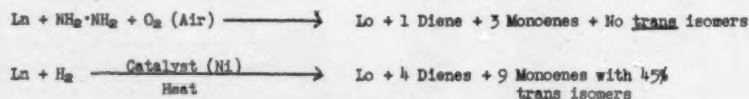
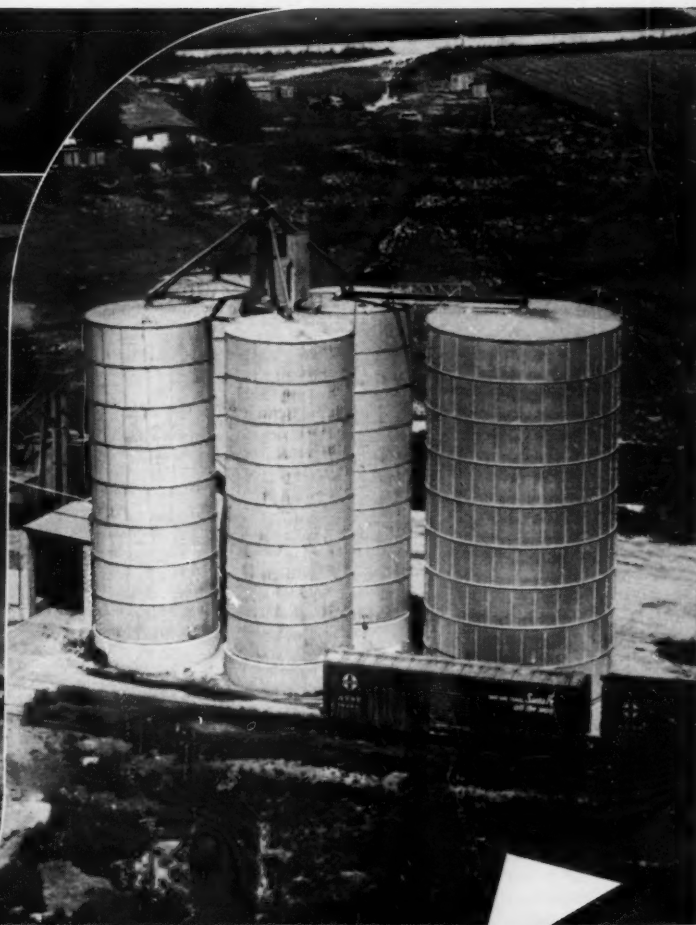


Fig. 5. Comparison of catalytic and hydrazine reductions of linolenic acid of soybean oil to give linoleic acid (Lo), other isomeric dienes and monoenes.

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## Aldehyde Oils

Our basic research on a new chemical from soybean oils, called aldehyde oils, has progressed rapidly in the past year. One phase which we have studied has been the reactivity of a derivative that appears to have a potential outlet in polyester products. We have prepared a new dibasic acid from aldehyde oil and pentaerythritol. This new dibasic acid forms linear polyesters, which are much like the polyesters used in fiber glass moldings for boats and chairs and in certain fibers. The properties of this new polymer undergo interesting changes when it is heated with acid. Although many materials are degraded or unaffected on

heating, these new products, which are originally soluble and moldable, become hard, insoluble, crosslinked products that appear to have unusual adhesive and cohesive strength (13). Further work on aldehyde oils is in progress.

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George Kromer

## OUTLOOK REPORT

# Sees 4.5 Billion Pounds Food Fats Exports in 61-62

THE TOTAL U. S. supply of edible fats, oils, and oilseeds during the 1961-62 marketing year is forecast at a record 16.1 billion pounds (in terms of oil), 2.1 billion pounds or 15% more than the quantity available a year earlier, George W. Kromer, economic and statistical analysis division, U. S. Department of Agriculture, told the 39th annual agricultural outlook conference in Washington Nov. 15. The increase in production is largely due to the record 1961 soybean crop, although lard and butter output will be slightly greater in 1961-62 than a year earlier. Beginning stocks on Oct. 1 were up somewhat (because of the huge carryover of soybean oil) from last year's total and output of food fats will hit a new high.

Domestic disappearance of food fats in 1961-62 probably will continue at about the annual rate of 46 pounds (fat content) per person. With the expected growth in population, total domestic use should increase by about 125 to 150 million pounds. These prospects indicate that the quantities of edible oils, soybeans, lard and butter available for export in 1961-62 will be a record 7 billion pounds, approximately 2 billion pounds or 40% more than last year.

Current prospects are that exports of food fats (including the oil content

of soybeans) through September 1962 may set a new record of around 4.5 billion pounds, roughly one-third more than 3.2 billion pounds exported during 1960-61.

Main factors in the export outlook include: (1) Europe will buy more U. S. soybeans because of expanding demand for soybean meal and the small supplies that are likely to be available from Communist China. Also, heavy buying by Europe this fall will, in part, reflect deferred purchasing last summer in anticipation of lower prices for new-crop beans in the United States; (2) Japan recently removed her restriction on imports of U. S. soybeans which will result in larger exports to that country; and (3) sharp expansion in movement of edible oils (cottonseed and soybean oils) under the Food for Peace program—about 1 billion pounds compared with 525 million in 1960-61.

The 1961-62 supply of soybeans is placed at 716 million bushels, up 134 million from the previous year. Soybean crushings in 1961-62 are forecast at a record 425 million bushels, up about 23 million bushels from the previous year and soybean exports at 175 million bushels, about 45 million more than in 1960-61.

Soybean seed and feed uses probably will require about 40 million bush-

- 5—E. N. Frankel, et al., *J. Am. Oil Chemists' Soc.* 38, 161 (1961).
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- 10—O. H. Alderks, *J. Am. Oil Chemists' Soc.* 26, 126 (1949); also C. H. VanEtten, et al., *J. Agr. Food Chem.* 7, 129 (1959).
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- 13—E. H. Pryde, et al., *J. Org. Chem.* 25, 2260 (1960).
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els of beans. If soybean crushing and export estimates are reasonably accurate, carryover stocks of old-crop beans on Oct. 1, 1962, may be around a record-high 75 million bushels, compared with a mere 6 million bushels on the same date this year and the record 62 million bushels of Oct. 1, 1959.

The season average price received by soybean farmers for 1961-crop soybeans is expected to be \$2.30 per bushel, about 5% more than a year earlier. The seasonal swing in soybean prices during 1961-62 is likely to be considerably less than the unusually large increase last year and prices will be linked closely to the CCC price support operations.

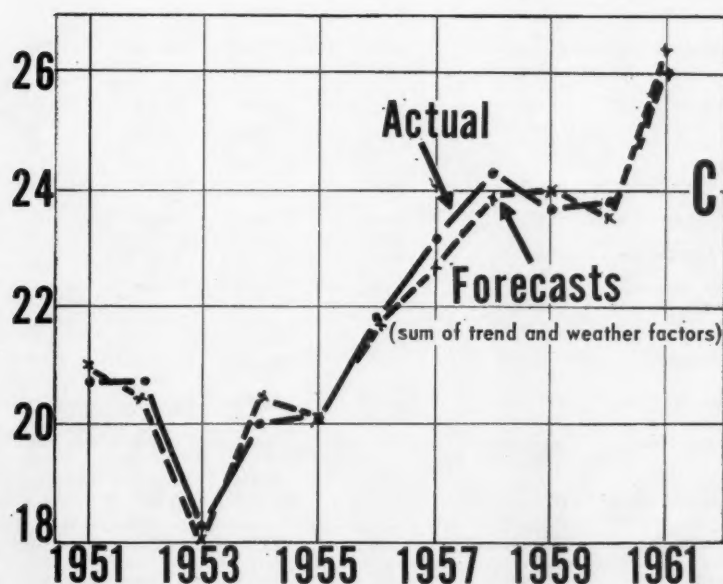
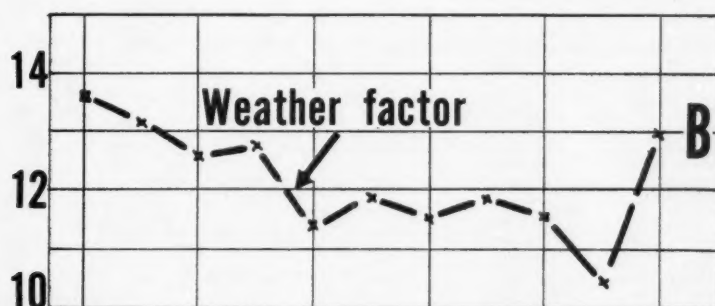
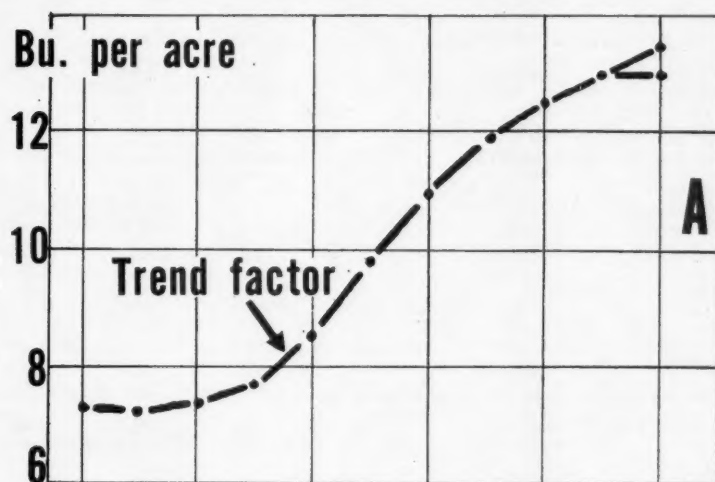
Domestic use of soybean oil in 1961-62 is forecast at 3.5 billion pounds, up slightly from the 1960-61 marketing year. The forecast assumes (1) total use of food fats will remain at about 46 pounds (fat content) per person; (2) supplies of lard will be up about 5% and most of this is expected to move into domestic consumption; (3) less cottonseed oil will be used domestically this year than last mainly because of its price premium and more oil will move abroad under government programs. The combined domestic and export requirements for bean oil in 1961-62 probably will be great enough to reduce soybean oil stocks considerably by Sept. 30, 1962.

Domestic use of soybean meal in 1961-62 is expected to be somewhat greater than in 1960-61. Poultry requirements will remain high, hog population will be up slightly, more cattle are on feed, and feeding ratios should be favorable. Prices of livestock and livestock products are expected to average close to the levels of 1961 and this should maintain a high feeding rate of protein per animal unit.

Soybean oil prices (crude, Decatur) during the 1961-62 marketing year are expected to average about the same as the 11.3c per pound for 1960-61.



## SOYBEAN YIELDS 1951-1960 AND FORECAST FOR 1961



## Forecasting The Soybean Yield Per Acre

*at least a year  
in advance*

By LOUIS H. BEAN

**R**EADERS OF the Soybean Digest may be interested in a novel system of forecasting crop yields and weather at least a year in advance. The writer, having experimented with it for many years and applied it to many crop and weather series in the United States and other countries, presents here the results for forecasting U. S. soybean yields per acre.

The system or method is based on the fact that neither fluctuation in weather nor in crop yields, in so far as yields are determined by weather, are due to chance but rather to orderly processes of nature which scientists and meteorologists are still trying hard to discover and to understand. It makes the assumption that certain results of orderly processes tend to repeat. This permits the use of data for years not later than, say, 1960 for predicting weather or crop yields for 1961, or when the 1961 yields are finally determined, to predict the yields for 1962.

The writer has found abundant evidence supporting this assumption in yield records for such important crops as corn, wheat, cotton, potatoes, olives and rice and many yearly and monthly rainfall and temperature series all over the world. Applied to U. S. soybean per acre yields, this system of analysis for the 10-year period 1951-

1960 gives the two common components:

1—A trend component which usually reflects the effects of man and his improving technology, and

2—Annual variations in addition to the trend which reflect the yearly changes in weather during the planting and growing season. The trend component is shown in section A and the weather-affected component in section B of the accompanying chart. In section C these two components are combined to represent forecasts and are contrasted with the yields that actually developed.

So that the application of the results may be clearly understood, note that for 1960 the trend element (in A) has a value of 13 bushels and the weather element (in B) has a value of 10.5 bushels. The sum, 23.5 bushels, is compared in section C with the 1960 actual yield of 23.8 bushels. The differences between the sums or forecasts and the actual yields for the entire 10-year period do not exceed half a bushel.

What does this system of forecasting, using data no later than December 1960, indicate for 1961? The trend factor may be taken as 13.4 in line with the 10-year experience or as the 1960 value of 13, but for the effects of 1961 weather conditions, the historical indication is for a sharp increase over the 1960 figure, namely, 13.0 compared with 10.5 in 1960. The sum for 1961 is therefore either 26.4 bushels or 26.0, depending on the assumption as to trend.

Up to the time of the August-September crop reports this forecast of a high record yield would have seemed unbelievable.

The latest indication as of Oct. 1 is a yield of 26.2 bushels. It will be interesting to see whether the 1961 forecast of a record yield is as close to the final figure as suggested by the experience of the previous 10 years.

## Build New Soy Milk Factory at Hong Kong

A NEW SOY MILK factory is being built at Kowloon (Hong Kong) which is twice the size of the factory in Aberdeen, according to K. S. Lo, managing director of the Hong Kong Soya Bean Products Co., Ltd. Mr. Lo says he hopes to have the new plant in production by next March.

Increase in sales of Vitasoy has been terrific, over 53% a year, with highest production 18,000 cases per day, according to Mr. Lo. "When our Kowloon factory is in operation we hope to be able to meet all the demand on both sides of the harbor."

# 1961 SOYBEAN CROP SUMMARY

Based on local reports by Soybean Digest correspondents

	Total yield	Oil content	Moisture content	Foreign material	Part of crop stored
N Miss. Co., Ark.	down 10%-15%	-----	very low	-----	small
Blytheville, Ark.	down 15%-18%	-----	10%	3%-4%	25%
Cross Co., Ark.	down 25%	-----	12%	very low	75%-80%
Augusta, Ga.	down 1 bu.	-----	low	up	50%
Del.	up 10%	sl. above av.	good	not bad	15%-25%
Sussex Co., Del.	up	19%	13½%-15½%	-----	small
Stanford, Ill.	higher	-----	low	low	-----
Central Ill.	up	-----	okay	not bad	large
Central Ill.	up 5%	-----	excellent	average	60%
E central Ill.	down 10%	-----	average	-----	75%
W central Ill.	double	-----	11%-12%	½%-1%	70%-75%
McLean Co., Ill.	-----	down 1%	12%	1%-1½%	30%
Champaign, Ill.	up	same	okay	okay	-----
Edgar Co., Ill.	down 5-10 bu.	-----	11%-12%	1%	40%
W central Ill.	down 10%	-----	13%	5%-6%	20%
Shelby Co., Ill.	up 25%	-----	okay	some	50%
Washington Co., Ill.	-----	-----	10%-17%	1%-20%	49%
Ill.	up	down .3%-.4%	12.5%	1.8%	60%
Central Ind.	up 2%-4%	-----	10%-14%	1%-5%	25%-30%
Tippecanoe Co., Ind.	up 25%-30%	-----	-----	-----	40%
Ne Ind. & nw Ohio	up 10%	-----	low	-----	70%
Nw Ind.	up 5%	normal	okay	okay	55%-65%
Mason City, Iowa	up 45%	lower	11.8%	1%	85%
Ne Iowa	up 7-8 bu.	-----	12%	3%	85%
Se Kans.	up 5%	-----	dry	low	50%
Kans.	up	good	9%-13%	2%	50%
Se Kans.	up 20%	good	12%	high	50%
S central Kans.	up	20%	11½%	2%	50%
W Ky., s Ind.	up	-----	10%-12%	2%	70%-80%
Lake Providence, La.	-----	-----	9%-11%	high	25%
Sw Minn.	up 10%-15%	same	11.6%	1%	85%-90%
S central Minn.	up 25%	-----	low	low	75%
S central Minn.	up 15%-20%	down	low	average	50%
Sw central Minn.	up 10%	-----	-----	-----	large
Sw Minn.	up	good	dry	low	95%
Morgan, Minn.	up 15%	-----	10½%-14%	1½%	85%
Clarksdale, Miss.	-----	17.5%	under 13%	4%	-----
St. Joseph, Mo.	up	-----	12%-12½%	2%	50%
Audrain Co., Mo.	up 20%	-----	13%-14%	1%-3%	65%
Mo.	much up	normal	okay	high	-----
Se Mo.	down	-----	low	average	20%
St. Joseph, Mo.	up	-----	10½%-13%	2%-4%	60%
N Mo.	up	good	low	-----	50%
Ne Nebr.	up	-----	9½%-12½%	1%-2%	30%
Nebr.	up 50%	19%-19½%	low	low	50%
Clayton, N. C.	down	-----	okay	high	-----
E N. C.	up 5%	-----	12½%	1%	50%
N. C.	up	-----	14%	average	-----
Amenia, N. Dak.	up	-----	14%	3%	75%
Paulding Co., Ohio	up 30%	normal	wet	high	55%
Ohio	up	okay	okay	some high	most
Van Wert Co., Ohio	up 10%	-----	10%-14%	1%-3%	75%
Union Co., Ohio	up 20%	-----	12%	low	60%
Kenton, Ohio	up	-----	13½%	high	50%-60%
W central Ohio	up 20%	-----	9%-12%	-----	80%-90%
Irwin, Ohio	-----	-----	dry	average	80%
Welch, Okla.	same	-----	13%-15%	low	50%
Calhoun Co., S. C.	-----	-----	13%	-----	60%
Lake Co., Tenn.	down 15%	fair	12%	1.7%	25%
Irrigated w Tex.	up	-----	8%-9%	low	-----
High plains Tex.	up	21%-22%	7%-10%	low	10%
Tidewater, Va.	-----	-----	14%	high	75%
Essex Co., Ont.	up	-----	low	low	30% to 40%
Essex Co., Ont.	up 20%	-----	14%	low	40%

Based on October and November reports. As reports are local, they may or may not check with statewide reports. All comparisons are with 1960. Most reports on storage are forecasts.

# Cut U. S. Yield; Record World Yield

U. S. SOYBEAN production was estimated at 700.8 million bushels as of Nov. 1, about 9 million bushels under the Oct. 1 estimate, according to the U. S. Department of Agriculture. Per acre yield was cut from 26.2 to 25.9 bushels on 27.1 million acres to be harvested. Previous per acre high was 24.2 bushels in 1958.

Estimated production is 142 million bushels above last year's crop and 120 million above the previous record soybean crop in 1958.

The 1961 harvest season has been quite satisfactory with no great delays in combining most places. Few beans remained in the field Dec. 1 except in some southern areas. Quality of the harvested beans is generally good and about equal to that of last year.

Farmers in all parts of the soybean belt were reported to be storing a considerably larger part of the crop than they were last year at this time.

World production of soybeans in 1961 is estimated at 1.1 billion bushels, by far the largest crop ever produced, the U. S. Department of Agriculture reports. This is 17% larger than last year's crop, 12% above the 1958 record and 65% above the 1950-54 average.

The phenomenal expansion in this year's production is due chiefly to the record U. S. harvest. Record crops also are being produced in Brazil and Canada, and Mainland China's outturn may be slightly larger than the reduced crop of last year.

Over two-thirds of the world pro-

duction of soybeans this year is concentrated in the free areas of the world with the United States alone accounting for 63% of the estimated total.

SOYBEANS FOR BEANS, November 1961  
Crop Reporting Board, SRS, USDA

	Yield per acre			Production		
	Average	Pre-	Average	Average	Pre-	Average
	1950-59	liminary 1961	1950-59	1960	liminary 1961	1961
	Bushels			1,000 bushels		
N. Y.	16.4	17.0	20.0	90	51	40
N. J.	20.4	24.5	25.0	615	808	775
Pa.	18.4	23.0	24.0	316	161	144
Ohio	23.2	25.0	28.5	28,153	37,850	48,336
Ind.	23.6	27.0	28.0	46,838	65,205	79,548
Ill.	24.6	26.0	29.0	107,187	129,298	159,732
Mich.	21.2	21.0	27.0	3,662	4,641	6,804
Wis.	15.4	16.0	18.0	1,139	1,536	2,088
Minn.	19.2	20.0	24.0	37,543	41,800	55,680
Iowa	23.5	26.0	29.0	51,965	67,574	102,022
Mo.	19.6	21.5	24.5	34,995	50,396	61,887
N.Dak.	13.8	13.0	13.5	1,517	2,288	2,727
S.Dak.	14.2	17.0	18.0	2,072	1,700	2,232
Nebr.	21.3	28.0	25.0	2,749	4,172	6,250
Kans.	13.1	22.0	22.0	5,295	12,892	15,444
Del.	18.8	24.0	24.0	2,105	4,536	4,896
Md.	20.4	26.0	24.0	2,949	5,850	6,384
Va.	18.6	22.5	21.0	4,036	7,200	7,392
N. C.	18.4	22.5	23.5	6,556	11,902	14,006
S. C.	13.1	19.5	21.0	3,147	9,730	11,739
Ga.	12.3	17.0	18.0	645	1,275	1,368
Fla.	20.4	26.0	27.0	523	780	972
Ky.	18.8	22.0	25.0	2,615	4,378	5,025
Tenn.	19.0	22.0	23.0	4,650	8,668	9,545
Ala.	19.5	24.0	25.0	1,982	3,192	3,800
Miss.	17.3	22.5	24.0	10,704	20,610	26,208
Ark.	18.4	21.0	21.0	24,003	50,589	54,138
La.	19.0	24.0	25.0	1,980	5,184	6,200
Okl.	13.1	20.0	21.0	682	2,480	3,045
Texas	21.4	27.0	28.0	446	2,025	2,408
U. S.	21.4	23.6	25.9	391,162	558,771	700,835

<sup>1</sup> Short-time average.

SOYBEANS: ACREAGE, YIELD PER ACRE, AND PRODUCTION IN SPECIFIED COUNTRIES AND THE WORLD, AVERAGE 1950-54, ANNUAL 1958-61<sup>1</sup>

	Acreage <sup>2</sup> (1,000 acres)				Yield per acre (bushels)				Production (1,000 bushels)			
	Average 1950-54				Average 1950-54				Average 1950-54			
	54	1958	1960	1961 <sup>3</sup>	54	1958	1960	1961 <sup>3</sup>	54	1958	1960	1961 <sup>3</sup>
North America:												
Canada	188	263	256	272	22.4	25.3	22.1	27.0	4,131	6,649	5,675	7,350
Mexico	---	1	7	8	---	24.8	24.8	24.8	---	37	184	202
United States <sup>4</sup>	14,747	23,993	23,639	27,100	20.3	24.2	23.6	26.2	298,422	580,250	558,771	710,475
South America:												
Argentina	2	1	2	---	13.8	14.9	13.2	---	30	22	29	---
Brazil	157	265	410	524	22.1	18.2	17.1	18.2	3,471	4,809	7,627	9,555
Colombia	---	20	28	30	---	18.6	19.2	18.6	---	367	533	551
Europe:												
Italy	2	1	1	---	22.0	28.1	30.2	---	34	21	17	---
Rumania	55	30	---	---	6.6	7.7	---	---	378	235	---	---
Yugoslavia	12	20	51	20	10.3	12.8	18.6	20.4	90	257	954	404
Other Europe (excl. U.S.S.R.)	15	5	5	5	---	---	---	---	55	55	50	50
U.S.S.R. (Europe and Asia)	813	956	---	---	6.0	8.8	---	---	4,825	8,414	---	---
Africa:												
Congo, Republic of the and Ruanda	9	15	12	10	7.4	9.9	8.9	7.4	69	147	110	73
Nigeria <sup>6</sup>	---	---	---	---	---	---	---	---	250	123	553	---
Asia:												
Cambodia	25	58	21	---	9.2	8.2	10.6	---	228	470	220	---
China, Mainland	28,219	24,200	23,500	23,500	11.7	14.9	14.1	14.6	330,000	360,000	330,000	340,000
China, Taiwan	62	118	150	155	9.2	12.9	13.6	14.9	576	1,532	2,056	2,280
Indonesia	1,066	1,469	1,607	1,680	10.2	10.5	10.0	9.6	10,829	15,360	16,060	16,167
Japan	1,036	856	758	707	16.0	16.8	20.2	19.3	16,521	14,374	15,344	13,669
Korea, South	625	664	674	---	7.8	8.5	7.1	---	4,835	5,635	4,778	---
Thailand	54	50	58	60	13.0	15.9	15.8	15.8	700	797	919	955
Turkey	8	15	16	---	12.9	8.8	12.1	---	104	129	193	180
Total, excluding Rumania, "Other Europe," U.S.S.R., China Mainland, and No. Korea <sup>5</sup>	18,065	27,890	27,780	31,370	---	---	---	---	340,790	631,495	614,630	768,065
Estimated world total <sup>6</sup>	47,865	53,780	53,190	56,785	---	---	---	---	681,050	1,005,200	958,275	1,121,910

<sup>1</sup> Years shown refer to years of harvest. Southern Hemisphere crops which are harvested in the early part of the year are combined with those of the Northern Hemisphere harvested the latter part of the same year. <sup>2</sup> Figures refer to harvested areas as far as possible. <sup>3</sup> Preliminary. <sup>4</sup> Acreage harvested for beans. <sup>5</sup> Less than 5 years. <sup>6</sup> Purchases for export. Local consumption is small. <sup>7</sup> Goal. <sup>8</sup> Includes estimates for the above countries for which data are not available and for minor producing countries. Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, other foreign source material, reports of U. S. agricultural attaches and other U. S. representatives abroad, and related information.

## BOOKS

### Oil World Yearbook Is Issued in Germany

THE FIRST international yearbook for the oils and fats industries has been issued by Siegfried Mielke & Co., Ratzeburg, West German publishers.

The Oil World Yearbook contains some technical articles but perhaps the most valuable information is the buyers' guide of suppliers industries, mainly European but with some U. S. suppliers; and the directory of the oils and fats industries. The latter directory includes oil millers and refiners, margarine factories, traders and associations in much of the free world except for the United States.

Oil World Yearbook. 96 pages and cover, limp leather binding, in English and German languages. Price Deutschmarks 16.60. Siegfried Mielke & Co., (24a) Ratzeburg, West Germany.





LINE OF fair goers waiting to receive food samples containing soybean products at the Soybean Council's exhibit at the second International Pacific Fair at Lima, Peru.

## SOYBEAN COUNCIL OF AMERICA, INC.

# Big Crowds at Lima Exhibit

THE SOYBEAN COUNCIL'S stand at the U. S. pavilion in the second International Pacific Fair at Lima, Peru, Oct. 11-29, was one of the best attended and best received—if not the best—of all U. S. exhibits, according to our reports.

The U. S. exhibit at the fair was the joint effort of the U. S. Department of Commerce and the U. S. Department of Agriculture. Soybean Council representatives were Dr. Guillermo Ivanissevich, the Council director for Peru, and Mrs. Ursula Kininmonth, the Council's home economist and food demonstrator.

The soybean up to now has been largely unknown, both as a farm crop and as a finished product, in Peru. Six hundred and fifty thousand people visited the U. S. pavilion during the fair and were greatly impressed with the exhibit, and attracted by the samples of soybeans shown, and by the food prepared in the Soybean Council kitchen, by Mrs. Kininmonth.

Pamphlets on the use of soybean products in human nutrition, and attractive recipes were handed out, and these as well as the food samples were very popular. Large queues were formed to try delicious soups, of different flavors such as tomato, carrot, leek, celery, pumpkin, and spinach, prepared with margarine; and the different cakes and pies made of soy flour and shortening. Both children and adults were delighted and returned for second helpings.

Two different receptions were given by the Soybean Council during the fair, one for the oil millers and government officials and the other for flour millers and members of the local press.

An item that attracted special attention at the receptions was the soy bread made by a local bakery with a content of 5% soy flour. Those present were informed concerning the excellent toasting qualities of this bread, and about the most important point, that the addition of soy flour to other flours produced a bread with a complete protein.

## Council Participates In Peru Poultry Week

THE PERUVIAN Association of Poultry Farmers organized Peru's third National Poultry Week, held in Lima, Oct. 7-14. The week was sponsored by the Peruvian Department of Agriculture, SIPA (Agricultural Research and Promotion Service), the Bank of Agriculture and Livestock Promotion, the Soybean Council of America, and several business enterprises.

Through the help of Javier de Salas, the Council's director for Spain, Dr. Juan Amich Gali, veterinarian of worldwide renown and specialist in feed formulas and animal nutrition, was brought from Barcelona, Spain, for the meetings.

Dr. Gali was very helpful in ac-



USE OF SOY FLOUR is explained to fair goers at the second International Pacific Fair at Lima, Peru, by Mrs. Carlota Ruso de Ocampo, kitchen demonstrator for the Soybean Council at the fair.

quainting Peruvians with Soybean Council activities. Also, he is a specialist in the use of fish meal in mixed feeds, and helped to banish fears that soybean meal could push out fish meal in Peru. Peru is one of the largest producers of fish meal in the world, with a yearly production of 650,000 tons.

During the meetings several visits to poultry farms were scheduled in the mornings, leaving afternoons for panel discussions and lectures.

Representatives of Peru government and industry as well as the U. S. Foreign Agricultural Service and industry helped to lend the meetings prestige.

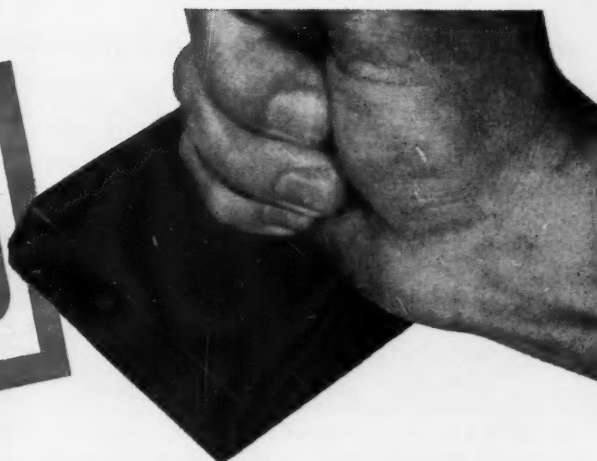
Other speakers included: Dr. Arturo Tello, San Marcos University; Dr. Juan Salas, technical advisor on mixed feeds to the Nicolini Hnos, S. A. plant; Ing. Vittorio Raggio, technical advisor on mixed feeds to Molinos Santa Rosa, S. A.; and Dr. Luis F. Marrou.

## SBC Exhibits at UAR Agricultural Fair

OVER 120,000 people saw the Soybean Council's exhibit of soybeans and soybean products at the second Agricultural and Industrial Production Fair at Mehalla el Kobra, United Arab Republic, during the month of October, according to Andre Tawa, the Soybean Council's UAR director. The fair was extended through Nov. 12.

The Council was enabled to make the display through permission of the Societe des Huileries at Savonneries. Mehalla el Kobra, population 650,000, is situated in the heart of the Delta

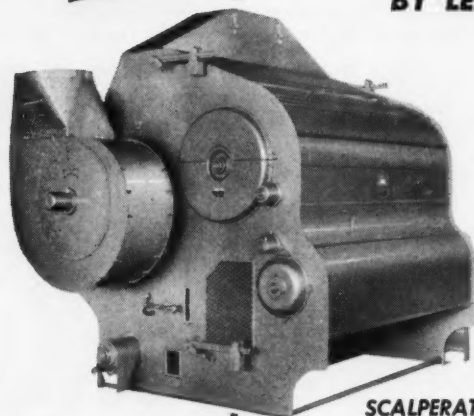
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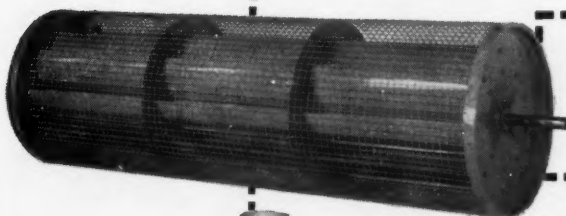
## OF SOY BEANS

### FIRST SCALPING AND ASPIRATION



SCALPERATOR

The Carter Scalperator does a good job of rough scalping and aspirating beans going directly to storage. It removes both coarse and light foreign materials. It also is a valuable machine to use on beans or grains when turned for cooling. Note that the Scalperator can be used on other grains without change of equipment. In capacity this is a "fast" machine. The Scalperator uses only rotary motion, thus does not vibrate.



**The Basic Unit**—Carter "Squirrel-Cage" Scalping Reel. Baffle plate construction retards flow of beans through the reel, insuring thorough rough scalping. The reel is self cleaning.

### SECOND SCREENING AND ASPIRATION



MILLERATOR

The Carter Millerator, used before processing the beans, does a refined job of screening and aspirating. Its upper screen removes all material that is *larger in diameter* than the beans, and much of the material that is *longer*.

Its lower screen removes small seeds and sand. Controlled aspiration effectively removes light foreign materials. The Scalperator and Millerator are all-metal, require low power. Write for complete information . . . today.



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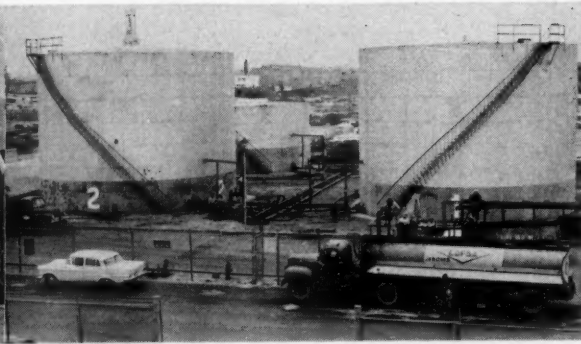
689 Nineteenth Ave. N. E. • Minneapolis 18, Minn.

# EFFICIENT SCALPING AND ASPIRATION

## The Soybean Council Around the World



AT COPENHAGEN "Woman and Home" Fair recently, Eivind Sondergaard, Soybean Council director for Denmark, shows the stand where chickens are deepfat-fried in soybean oil to Her Royal Highness, Princess Margrethe of Denmark, and Mrs. Lis Groes, national president of the Danish Women's Association.



A SHIPMENT of 4,012 metric tons of semi-refined U. S. soybean oil was unloaded at the Port of Callao, Peru, on Oct. 24. Part of the oil was immediately transferred to oil transports for delivery to four Peru refineries. The photo shows a transport of Cia Oleaginosa del Peru being loaded with soybean oil from the storage tanks.



GROUP at the recent opening of the Turkish office of the Soybean Council in Ankara. Left to right, Fred R. Marti, the Council's director for international operations; Javier de Salas, the Council's director for Spain; Oldrich Fejfar, assistant U. S. agricultural attache; N. Osman, office of U. S. agricultural attache; Gordon R. Schlubatis, U. S. agricultural attache; Vasfi Hakman, the Council's director for Turkey; Osman Kocturk, from the Turkish Ministry of Education; and Franco Oddone, administrative officer for the Council's overseas offices.



OPENING of the third Poultry Week at Lima, Peru. Left to right: Dr. Guillermo Ivanishevich, the Council's director for Peru; Dr. Juan Amich Gali, technician in animal nutrition; Ing. Ignacio Macias, former secretary of the Peruvian Agricultural Department, and president of the Peruvian Association of Cattle Farmers; Ing. Jacobo Zender, general secretary of the Peruvian Agricultural Department; and Guillermo Gallo Porras, president of the Peruvian Association of Poultry Farmers.

and has more than 500 firms, mainly for cotton, weaving and spinning.

The fair was sponsored by the Mehalla municipality in cooperation with the local firms to show the evolution and success of the UAR industrial, agricultural, and construction renaissance.

The Council also participated with a small stand at the eighth International Fair at Damascus, Syria, in late-summer. The fair is a yearly event with 25 countries participating and a record number of visitors from all over the Arab world. This year's attendance was estimated at 1,620,000 people.

### Spanish Staffmen Are Honored by Poultrymen

JAVIER DE SALAS, the Soybean Council's Spanish director, and Gonzalo Rivera, deputy director, were

given honorary memberships in the National Poultry Association of Spain at the recent 9th national poultry conference held at Valladolid, Spain. The awards were made in acknowledgment of the work that the Council has done in Spain to help poultry production.

Practically all the Spanish poultry farmers attended the conference. Some of the lectures presented were about the importance of soybean meal in poultry nutrition.

### The Cover Picture

The front cover shows drums of U. S. soybean oil being unloaded from ship on arrival in Teheran. Left to right, Bahman Sepahpur, the Soybean Council director for Iran; Ahmad Lajevordy, oil processor; and T. O. Engbretson, U. S. agricultural attache.



SOYBEAN COUNCIL'S display of soybeans and soybean products at the second Agricultural and Industrial Production Fair at Mehalla el Kobra, United Arab Republic, Oct. 1-Nov. 12. Left to right, Samir S. Durzi, agricultural assistant for the Soybean Council at Cairo; and Said Shibl and Mrs. Tahiya Manharawi of the publicity department, Societe des Huileries et Savonneries, S. A. E., Tanta.



# Meal Use Expands in Japan

By SHIZUKA HAYASHI

Managing Director, Japanese American Soybean Institute, Nikkatsu International Bldg., No. 1, 1-Chome Yurakucho Chiyoda-Ku, Tokyo, Japan

PARALLELING the growth of the Japanese livestock industry the demand for livestock feed has increased sharply during recent years. As shown in table No. 1, production of livestock feeds during 1960 was more than 2.5 million tons or nearly 50% more than the previous year and three and one-half times that of 1956. Livestock production is shown in table No. 2.

Approximately 80% of the annual feed production is used by the poultry industry. The other 20% goes for swine and cattle.

The ingredients used in the production of mixed feeds vary somewhat from time to time depending on the supply situation and price fluctuation of the different ingredients. See table No. 3.

The percentage of soybean meal used in livestock feeds is about 5%, as indicated by the table. The reason for this small percentage is due largely to the higher price of soybean meal as compared to prices of other ingredients.

The many years of government control which restricted free imports of many commodities including soybeans created an abnormal state of the economy. The price level of soybean meal in Japan has been far above what it normally should be. This has become chronic and has robbed consumers of the desire for lower and more competitive prices. Table No. 4 shows the prices of various feed ingredients.

The return of imports to unrestricted free trade on July 1 has changed the picture. Soybeans are now freely imported. The artificial high price of soybean meal will have to be corrected to be in line with the

world market or be competitive with imported meal which is expected to be liberalized in the near future. The time will come, perhaps soon, when soybean meal will be used in a much larger quantity for poultry feed.

Mixed poultry feeds in the United States now include nearly 30% soybean meal. The same formulas could be used by the Japanese poultry industry. Plans are now being worked out by the Japanese American Soybean Institute for promotion toward this end.

Table No. 3  
CONSUMPTION OF INGREDIENTS FOR  
PRODUCTION OF MIXED FEEDS IN 1960  
(JAN.-DEC.)

Ingredient	Consumption (M/T)	Compared with previous year (%)	Share in feed production (%)
Corn	1,212,826	140.0	48.0
Wheat barley	86,713	116.7	3.4
Other grains	23,129	314.5	0.9
Wheat bran	263,202	148.4	10.4
Barley bran	22,749	107.7	0.9
Rice bran, rice oil meal	123,187	160.2	4.9
Other brans	90,934	146.4	3.6
Soybean meal	133,805	158.8	5.3
Copra meal	22,706	140.3	0.9
Linseed oil meal	49,789	154.4	2.0
Other oilseed meals	85,664	157.2	3.4
Fish meal, fish meal cake	149,434	147.5	5.9
Other feedstuffs of animal origin	36,906	122.7	1.5
Special feedstuffs	78,304	135.1	3.1
Others	147,126	175.1	5.8
Total	2,526,474		100.0

Table No. 1  
PRODUCTION OF MIXED FEEDS 1956/1960 IN JAPAN CLASSIFIED BY USE (METRIC TONS)  
Source: Agriculture-Forestry Ministry Livestock Bureau

Calendar year	Dairy cattle	Draft cattle	Poultry	Others	Total	Compared with previous year
1956	103,305	---	439,848	176,029	737,427	144.8%
1957	171,037	4,611	940,895	18,245	1,172,554	159.0
1958	164,281	3,903	1,062,976	56,011	1,310,098	111.7
1959	201,516	1,849	1,421,904	78,938	1,710,612	130.6
1960	273,033	4,309	2,061,564	85,343	2,521,489	147.4

Table No. 2  
NUMBER OF LIVESTOCK AND POULTRY REARED IN PAST 5 YEARS (1,000)  
As of Feb. 1 each year. Source: Agriculture-Forestry Ministry Statistic & Survey Division. Percentage in brackets represents comparison with previous year.

Calendar year	Chickens	Dairy cattle	Draft cattle	Horses	Hogs
1957	45,341 (106.3%)	588 (118.3%)	2,590 (95.3%)	818 (92.2%)	1,546 (132.1%)
1958	50,291 (110.9%)	654 (111.2%)	2,465 (95.9%)	762 (93.1%)	1,649 (106.6%)
1959	48,215 (95.9%)	751 (114.8%)	2,365 (95.2%)	728 (95.5%)	2,244 (136.1%)
1960	54,627 (113.3%)	824 (109.7%)	2,340 (98.9%)	673 (92.4%)	1,918 (85.5%)
1961	71,806 (131.4%)	885 (107.5%)	2,313 (98.9%)	618 (91.9%)	2,604 (135.8%)

Table No. 4  
TOKYO WHOLESALE PRICES OF FEEDS (AVERAGE SEPTEMBER 1961)  
Source: Agriculture-Forestry Ministry Feed Marketing Division

Feed	Basis	Wholesale price Yen	Yen per M/T	\$ per M/T	Crude protein (%)
Wheat bran	30 Kg, free on rail from mill	700	23,333	64.81	15.9
Barley bran	30 Kg, free on rail to buyer	600	20,000	55.56	7.7
Rice bran	30 Kg, ex rice store	529	17,633	48.98	14.5
Soybean meal	37.5 Kg, free on rail to buyer	1,543	41,147	114.30	45.8
Linseed meal	37.5 Kg, free on rail to buyer	1,038	27,680	76.89	33.9
Corn	37.5 Kg, in port warehouse	954	25,440	70.66	9.9
Fish meal cake (mackerel pike)	100 Kg, free on rail to buyer	5,562	55,620	154.50	65.8
Defatted rice bran	25 Kg, free on rail to buyer	565	22,600	62.78	19.0
Copra meal	37.5 Kg, free on rail to buyer	813	21,680	60.22	22.1
Cottonseed meal	37.5 Kg, free on rail to buyer	1,028	27,413	76.15	39.7
Rapeseed meal	37.5 Kg, free on rail to buyer	1,027	27,387	76.07	30.7
Oat	40 Kg, free on rail to buyer	1,200	30,000	83.33	11.6

Crude protein content is based on Agriculture-Forestry Ministry analysis. Prices of feed soybean meal disposed by the government are taken into consideration in indicating wholesale prices of soybean meal. Meals sold by the government to breeding associations are priced at 1,270 yen per 37.5 Kg, 33,868 yen or \$94.08 per M/T.

## Illinois manager reports on SHANZER grain drier

"My new Shanzer drier helped me to the best year I've ever had. We had heard from other operators about Shanzer's exceptional performance and safety reputation, but it takes day after day experience to see how much difference in driers there really is."

— Says, Wm. J. Henebry, Mgr. Monticello Grain Co. Monticello, Illinois



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## GRITS and FLAKES . . . from the World of Soy

### John Henderson General Manager Victory Mills

Victory Soya Mills, Ltd., Toronto, has announced the appointment of John C. Henderson as vice president and general manager of the firm.



John C. Henderson

Mr. Henderson, now vice president-sales, succeeds E. L. Newman, who retired Nov. 1. Mr. Newman has been vice president and general manager for the last 7 years.

Mr. Henderson first became associated with the feed industry in 1941 when he joined the feeds administration of the Wartime Prices and Trade Board. He joined Victory Mills in 1946 and became vice president-sales in 1955.

### ADM, Garnac Grain Build Export Terminal in La.

Archer-Daniels-Midland Co., Minneapolis, and Garnac Grain Co., New York, have begun construction of a jointly-owned grain export terminal elevator on the Mississippi River at Destrehan, La., near New Orleans.

The new terminal, which will operate as the St. Charles Elevator Co., will aid in relieving the loading and unloading congestion that prevails in grain export operations in the New Orleans area, the two companies said.

ADM engineers designed the new facility, which will be equipped with

the most modern devices for unloading, conditioning, cleaning and drying grain.

### Kaiser Promoted to Vice President of R. J. Brown

At a recent meeting of the board of directors of the R. J. Brown Co., St. Louis, Mo., L. J. Kaiser was promoted to vice president. The announcement was made by E. L. Metcalf, president.

Mr. Kaiser, who has been in the coatings industry for the past 18 years, became associated with R. J. Brown in 1949. He was named sales manager in January 1958. In his new position, he will continue to have general supervision of the firm's entire sales operation.



L. J. Kaiser

### Swift & Co. Changes Managers at Two Mills

Swift & Co. has announced managerial shifts at two soybean mills.

Harry F. Lester will be manager at the Des Moines, Iowa, mill. He succeeds C. D. Whitaker, who will be transferred to the general oil mill department at Chicago.

James A. Smith was appointed manager of the Swift mill at Fostoria, Ohio.

Mr. Lester had been manager at the Fostoria mill since 1955. His career with the company started in Des

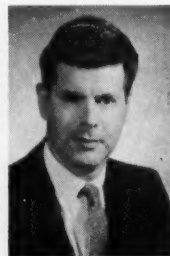
Moines in 1943. Mr. Whitaker had been at Des Moines as manager since 1950. He started with Swift in 1938 at Palestine, Tex.

Mr. Smith has been with Swift since 1949, when he started as a seed buyer at Selma, Ala.

### Named Sales Manager of C & T Refinery in N. C.

The appointment of Dan A. Young as sales manager of C & T Refinery, Charlotte, N. C., has been announced by P. Linwood Drudge, executive vice president. C & T is one of the South's leading refiners of soybean and other edible oils.

Mr. Young, a native of Chicago, has been associated with Armour & Co. since 1941, serving the past 5 years as sales manager of the Los Angeles refinery division.



Dan A. Young

### Cheesar to R. J. Brown's Solvents, Chemicals Div.

L. J. Kaiser, vice president for the R. J. Brown Co., St. Louis, recently announced that Andrew Cheesar, Jr., had been transferred to the company's petroleum solvents and chemicals division at Indianapolis. He will be added to the sales force to accommodate expanded sales activity in that area.

Mr. Cheesar joined R. J. Brown in 1940. He is a graduate of Temple University.

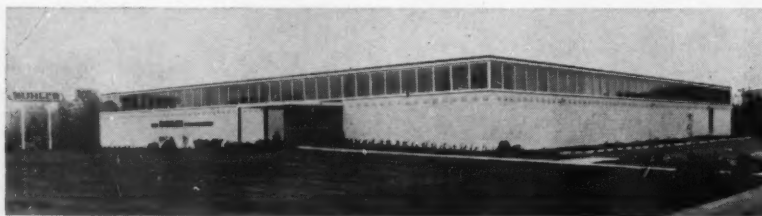


Andrew Cheesar

### Open New Bunge Corp. Port Elevator in La.

Bunge Corp.'s new 2-million-bushel port elevator located at Destrehan, La., on the Mississippi River about 12 miles north of New Orleans, recently commenced operations with the loading of several cargoes of grain for export.

Completed at a cost of over \$5 million, the elevator provides a key link in Bunge's expanding network of



BUHLER CORP. held open house at its new headquarters at 8925 Wayzata Blvd., Minneapolis, Nov. 21. The new building is of an interesting architecture, using a new type of reinforced concrete construction—the various sections consisting of hyperbolic paraboids (shape of an inverted umbrella). Since being incorporated as a Minnesota corporation in February 1958, Buhler has grown to be a major supplier of machinery and equipment for various industries including oil mills. C. R. Moor (right) took charge of the company in February 1958 when it became a Minnesota corporation.



country, terminal, and river elevators. It opens increased export possibilities to U. S. farmers throughout the major grain producing areas.

### Beach Is New Director Of New Orleans Elevator

John H. Beach, former general foreman of the Cargill grain elevator near Baton Rouge, La., has been appointed director of the Public Grain Elevator in New Orleans.

He succeeds Robert H. Jordan who resigned Nov. 1 to become director of the new public elevator in Beaumont, Tex. Sidney Brodtmann, a 26-year veteran of the elevator staff, has been serving as acting director.

Mr. Beach has also worked in grain elevators in Maumee, Ohio; Buffalo, N. Y.; and Minneapolis, Minn. He has worked for the Toledo, Ohio, board of trade, and was superintendent of the public elevator in New Orleans earlier this year.

### Cargill Makes Personnel Changes in Iowa Division

Cargill, Inc., has announced several personnel changes in its vegetable oil and grain divisions in Iowa.

Wendell J. Wheeler, manager of the Fort Dodge oil plant, will become manager of Cargill's new Des Moines plant. Mr. Wheeler will be succeeded by Robert Cowdery, manager of the grain branch office in Fort Dodge.

Richard Kipf, formerly with the firm's Sioux City office, will manage the Des Moines office.

Curt Twedt, bean buyer, and Robert Varnum, plant superintendent, both formerly with the Spencer Kellogg division of Textron, Inc., have joined the Des Moines vegetable oil staff in those same capacities.

Receipt of truck grain and soybeans was suspended for 1 day following a dust explosion in the grain elevator of Central Soya's Decatur, Ind., plant Nov. 1. All other operations, including processing and feed manufacturing, continued without interruption. Ten men were injured by the blast, none critically.

After 50 years as E. F. Drew & Co., Inc., the firm has announced change of its corporate name to **Drew Chemical Corp.**, 15 E. 26th St., New York 10, N. Y., as part of its reorganization and expansion program. See the firm's advertisement in this issue.

Shanzer Manufacturing Co., manufacturer of grain driers in San Francisco for 25 years, has been purchased by **Hart-Carter Co.**, Peoria, Ill. Most of the Shanzer production will be moved to the Midwest and the entire

operation will be merged into Hart-Carter.

Max Kantor, formerly vice president of research at Honeymead Products Co., has joined **Minnesota Linseed Oil Co.** as vice president in charge of technical oils, sales and service.

The transfer of James W. Ringwald, vice president of **Bunge Corp.**, to the firm's Kansas City office has been announced. He will supervise the large and fast growing interior river operations of Bunge.

**Tennessee Belting Co.**, Memphis, Tenn., completed its 37th year by occupying a modern steel, brick and concrete building at 265 Exchange, specially designed for its use. The firm was established by J. P. Mariencheck whose son, Joe, now heads the business, and by the late John Latsch. Miss Katherine Rother, secretary-treasurer, is the latter's niece.

The 27th annual Chemurgic Conference will be held Apr. 11-13 at the Sheraton-Atlantic Hotel, New York City.



This is Allied Mills, one of the largest and most modern soybean processing plants in the world.

Here . . . in Taylorville, Illinois . . . the soybean extraction plant was designed, engineered, and constructed by Weitz-Hettelsater Engineers. Facilities also include 1,650,000 bushels of storage, flake preparation building, and complete machinery.

Throughout more than 40 years of specialized service to the grain and feed industry, we've engineered and constructed many of the major facilities throughout North America.

We'll be glad to show you what we've done for others . . . talk about what we may be able to do for you.



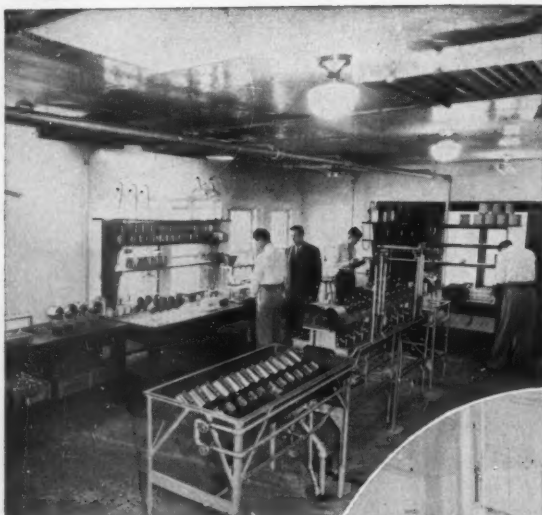
### WEITZ-HETTELSATER ENGINEERS

Division of The Weitz Company, Inc. • Des Moines

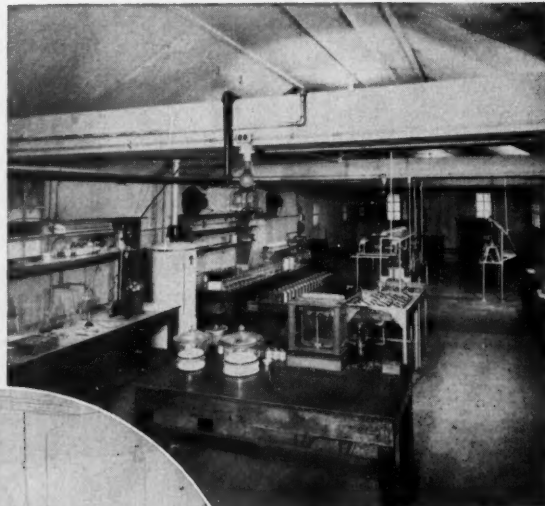
1911 BALTIMORE AVENUE • KANSAS CITY, MO. • BALTIMORE 1-3930



# 8 Chemical Laboratories To Serve You 8



Our Chicago laboratory is equipped with the most modern equipment for refining soybean oils, soybean products and feeds.



Our Des Moines laboratory has the latest equipment for refining oils, soybean products and feeds.



Our Oil Refining Department at Memphis has a capacity of 150 refinings daily. We also are equipped to analyze soybean products and all types of feeds.

**LITTLE ROCK, ARK.**  
412 W. 7th St.

**WILSON, ARK.**  
7 Union St.

**CLARKSDALE, MISS.**  
75 Sunflower St.

**CAIRO, ILL.**  
4007 Sycamore St.

**CHICAGO 19, ILL.**  
1526 East 75th St.

**DES MOINES, IOWA**  
3507 Delaware St.

**NEW ORLEANS, LA.**  
4301 Laurel St.

Official Chemists for the Chicago Board of Trade  
Official Chemists for National Soybean Processors Association



Phone: JA 5-6333

Main Office: 265 S. FRONT ST.

MEMPHIS, TENN.

Serving the Soybean Industry Since 1935

# German Imports of U. S. Beans Up

**GERMANY.** The Hamburg office of the Soybean Council of America reports that West German imports of soybeans from the United States in the January-August period were well ahead of the same period a year ago, 515,363 metric tons compared with 445,161 metric tons. Imports from China dropped from 209,182 metric tons in the January-August period last year to 27,612 metric tons this year.

West German imports of soybean oil from the United States January-August were down from 19,417 metric tons to 2,861 tons this year, and total soybean oil imports were only a third of last year.

West Germany's imports of edible fish oils reached 32,110 short tons during January-June 1961, a 20% increase over the same period of 1960, the U. S. Department of Agriculture reports. Production of edible fish oil in West Germany, and several other European countries, is running ahead of 1960. The resulting buildup in fish oil supplies has caused some foreign buyers to withhold purchases in hopes of lower oil prices. German importers of fish oil have adopted a similar stand with the hope that U. S. and Peruvian fish oil prices will decline under the weight of heavy oil supplies. Both the United States and Peru, the major suppliers of fish oil to West Germany, are experiencing a record production of fish oil in 1961.

**MEDITERRANEAN OLIVE OIL.** There will be a smaller olive oil crop this year in Spain, Italy, and Tunisia, but a larger crop in Greece and Turkey than last year, according to our information from overseas. Latest reports indicate that the olive oil crop in Greece will amount to some 230,000 metric tons, up from 70,000 last year. Greece became an olive oil importer last year and bought a number of lots from Spain and other countries. This year Greek authorities will establish an oil reserve of about 50,000 metric tons to regulate the market and avoid imports. Domestic olive oil consumption in Greece is estimated at about 100,000 tons.

In Turkey some 90,000 metric tons of olive oil will be obtained, an increase of 20,000 tons above last year's crop. It is believed that Turkey will be able to export a small amount of oil this year.

Forecasts for the Italian olive oil crop this year are on the low side, and it is believed that Italy will have to import edible oils. Estimates of the Spanish olive oil available for the coming season are unchanged, at 370,000 metric tons.

Tunisia is expected to have a much smaller olive oil crop than a year ago, when production amounted to 120,000 metric tons as compared to an estimate of 35,000 this year. It is possible that even this amount may never be reached and that Tunisia will be out of the export market next year.

Source of the above information is Jomar.

**TALLOW MARKET.** Trade News Service, New York, quotes from the speech of C. W. Astell, Frank Fehr & Co., London, before the National Renderers Association, United States: "The years after World War II to the present day I usually refer to . . . as the detergent years. As someone actively engaged in the trading of tallow, I used to have a quite unprintable name for detergents. But we have good reason to hope that tallow will more and more be used in powders.

"During these years, a revolutionary change was taking place in your country. Your production of tallow had

soared from 250,000 tons prewar to 1,350,000 tons. Detergents were going ahead rapidly and from being an importer of tallow you had tallow to sell. Slowly but surely you built up exports from 13,000 tons in 1946 to around 680,000 tons in 1960, a tremendous feat. But how was it accomplished? Firstly, because of the changed position of palm oil. You will remember prewar many hundreds of thousands of tons were going into the soap kettle. After World War II, much research went into the quality of palm oil. All at once, this oil became attractive to the edible oil trade and was lost to soapers . . . Hence, tallow became essential to the soap making industry and you, with your great surplus, filled the gap to a very great degree . . .

"I believe there is sufficient tallow to go round the world and whilst I do not believe your exports in 1962 will be quite so good as 1961 I have great hopes that, given a period of peace, tallow consumption will slowly increase as many nations find their feet and the world helps those nations in their initial difficulties."

**SUEZ SHIPMENTS.** Shipments of soybeans through the Suez Canal in the marketing year 1960-61 were only 328,500 short tons, about a third of the shipments of the previous year, largely due to the drop in export of Chinese soybeans, according to USDA.

Total oilseed shipments through the Suez Canal during the year were at the lowest level since 1949-50 with the exception of 1956-57 when the Canal was closed for 5 months, November through March.

**EXPORT ORDERS.** USDA announced the following purchase authorizations and agreements for U. S. soybeans and soybean products during November:

Nov. 1, extension of the terminal contracting and delivery dates to Feb. 28 and Mar. 31, respectively, in certain Food for Peace purchase authorizations issued to Iceland, including 40-55 for \$100,000 worth (about 300 metric tons) of cottonseed oil or soybean oil; 240 tons have been purchased. (See press release USDA 3583-61.)

Nov. 13, an amended agreement with the United Arab Republic including sale of an additional \$5.3 million worth (about 39.7 million pounds) of cottonseed or soybean oil for Egyptian pounds under Title I of P. L. 480.

Purchase authorizations will be announced later. (See Press Release USDA 3722-61.)

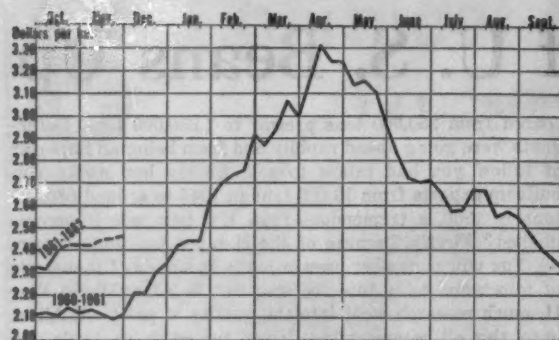
Nov. 13, an agreement with the government of Venezuela to finance the sale of up to \$25 million worth of U. S. agricultural commodities through long-term dollar credits under the Food for Peace program. Includes U. S. soybean oil and cottonseed oil.

The commodities made available under this agreement will be used by Venezuela in expanding its programs of providing low-cost nutritious meals to low-income and needy persons through public institutions. (See press release USDA 3720-61.)

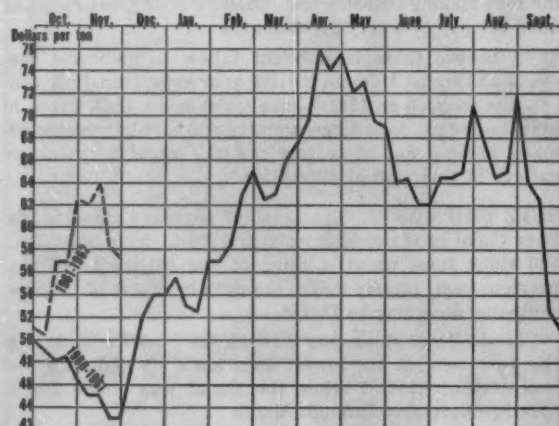
**PURCHASES.** USDA announced the following purchases during November:

Nov. 21, by Commodity Credit Corp., 1,300 metric tons (2,865,980 pounds) of cottonseed salad oil for export to Kenya under an Agency for International Development (AID, formerly International Cooperation Administration) program. The award was made to Bunge Corp., New York, N. Y.

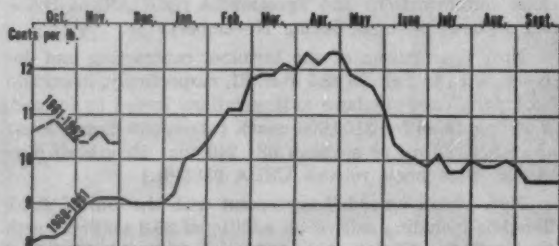
# **TRENDS AT A GLANCE (WEEKLY CLOSE)** No. 1 Cash Soybeans, Chicago



## **BULK SOYBEAN MEAL, DECATUR**



## **CRUDE SOYBEAN OIL, TANKERS**

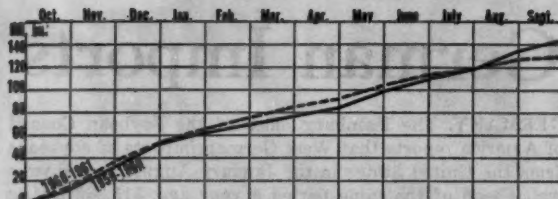


## **CASH PRICES, NOVEMBER 1961\***

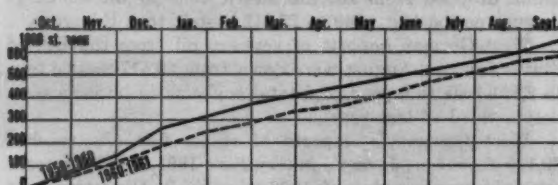
	No. 1 yellow soybeans Chicago	Bulk soybean meal Decatur	Soybean oil Decatur	Cottonseed oil Mississippi Valley	Coconut oil Pacific Coast	Lord Chicago
Nov. 1	\$2.41 1/4	\$62.00	\$.10 3/4	\$.12	\$.11 1/4	\$.0822
2	2.42 1/2	62.00	.10 3/4	.12 1/4	.11 1/4	.0825
3	2.42 1/2	62.00	.10 3/4	.12 1/4	.11 1/4	.0825
6	2.42 1/2	62.00	.10 3/4	.12 1/4	.11 1/4	.0825
7	2.44 3/4	62.00	.10 1/2	.12 1/4	.11 1/4	.0820
8	2.46	63.50	.10 1/2	.12 1/4	.11 1/4	.0820
9	2.45 1/4	64.00	.10 3/4	.12 1/4	.11 1/4	.0825
10	2.45	64.00	.10 3/4	.12 3/4	.11 1/4	.0825
13	2.46	62.50	.10 1/2	.12 3/4	.11	.0830
14	2.46	61.50	.10 3/4	.12 1/4	.11	.0825
15	2.46 1/4	59.50	.10 3/4	.12 1/4	.10 7/8	.0830
16	2.45 1/2	58.50	.10 3/4	.12 1/4	.10 3/4	.0850
17	2.45 1/4	58.50	.10 3/4	.12 1/4	.10 3/4	.0850
20	2.44 1/2	58.50	.10 3/4	.12 1/4	.10 3/4	.0850
21	2.44 3/4	58.00	.10 3/4	.12 3/4	.10 3/4	.0850
22	2.46 1/4	58.00	.10 3/4	.12 1/2	.10 5/8	.0850
23 Thanksgiving						
24	2.46 3/4	57.50	.10 3/4	.12 1/2	.10 3/4	.0850
27	2.46 3/4	57.00	.10 3/4	.12 3/4	.10 3/4	.0850
28	2.46 1/2	57.00	.10 1/4	.12 3/4	.10 3/4	.0850
29	2.47	57.00	.10 1/4	.12 3/4	.10 3/4	.0850
30	2.46	58.00	.10 1/4	.12 3/4	.10 3/4	.0875

\* From Wall Street Journal, Chicago.

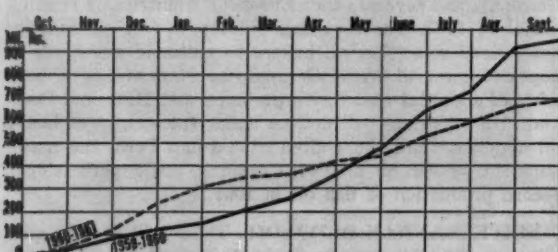
# **EXPORTS 1959-60 AND 1960-61** Cumulative year beginning Oct. 1



## **SOYBEAN CAKE AND MEAL EXPORTS**



## **SOYBEAN OIL EXPORTS**



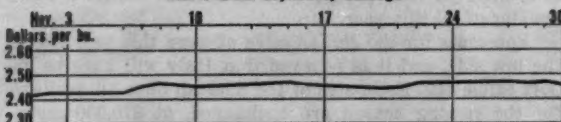
## **1960 AND 1961 SOYBEAN CROPS**

	1961-62	1960-61
Total new-crop soybeans under support Oct. 31	16,041,804 bu.	3,609,278 bu.
Total soybeans inspected for overseas shipment and lake shipments to Canada Oct. 1-Nov. 24	38,794,580 bu.	33,897,659 bu.
Soybeans crushed for oil or processed Oct. 1-31	36,223,000 bu.	35,637,000 bu.
Soybeans exported Oct. 1-31	20,000,000 bu.*	14,050,000 bu.
Balance on hand Nov. 1 for processing, export, or carryover	615,602,000 bu.	486,302,000 bu.

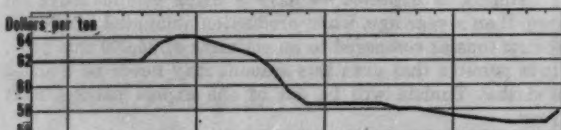
\* Estimated. For more details on supply and distribution of the soybean crop, 1958-61 crop years, see table on page 33.

## **DAILY MARKET PRICES**

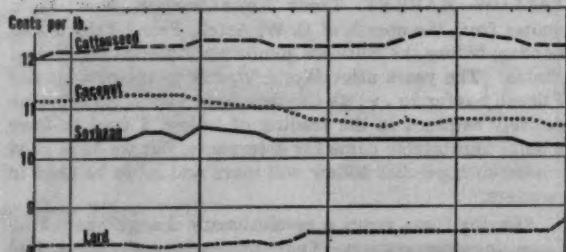
### No. 1 Cash Soybeans, Chicago



## **BULK SOYBEAN MEAL, DECATUR**



## **CRUDE VEGETABLE OILS AND LARD**





# Howard E. Grow Minn. Seedsman Joins ASA Staff

HOWARD E. GROW, manager of the field seed department, Farmer Seed & Nursery Co., Faribault, Minn., has accepted appointment as assistant to the executive vice president of the American Soybean Association, Hudson, Iowa, effective Dec. 1, Geo. M. Strayer, ASA executive vice president, has announced.

Mr. Grow is a native of Dawson, Minn., and a graduate of the University of Minnesota College of Agriculture, with a degree in agronomy.



Howard Grow

He worked for the federal government in the drought seed program for awhile during the 1930s, and spent 10 years as a county agricultural agent in northwestern Min-

nesota, in Pennington and Kittson Counties. He was manager of a seed cooperative at Williams, Minn., for 1½ years. For the past 14 years he has been manager of the field seed department, Farmer Seed & Nursery Co., Faribault, Minn.

Mr. Grow is a past president, vice president and board member of the Minnesota Seed Dealers Association. For the past 3 years he has been a board member and a member of the certification committee of the Minnesota Crop Improvement Association.

He was a member of the Faribault board of education for 9 years, and served on the agricultural committee of the Faribault Chamber of Commerce for 14 years. He has been president and a member of the church council of the local Lutheran Church.

Mr. Grow is married and has four children: Roger, now enrolled in the Lutheran Seminary in St. Paul; Elizabeth, a freshman at the University of Minnesota; Tom, a sophomore in high school; and Katherine, in the eighth grade.

He plans to move soon with his family to Hudson.



## *important notice to the food industry*

As part of our expansion program, we are pleased to  
announce the change in our corporate name  
from

**E. F. DREW & CO., INC.**

to

**DREW CHEMICAL CORPORATION**

To keep pace with the changing technology of today's  
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the development of food emulsifiers and other  
nutritive specialties.

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**DREW CHEMICAL CORPORATION**

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## Peter Punctures Rumors

IT'S THAT TIME of year when many possibilities outside the regular forecasts can affect the picture ahead. Whether these events are going to happen, or you only think they are going to happen, they too frequently affect the way you plan, do business and, accordingly, the returns for your labors.

So—here's our report on a few of such possibilities. Some have reached you in the form of rumors, others only as misguided or misinterpreted news. In either case, our comments:

**Price supports for soybeans to be lowered next year.** Answer: false. We have fairly well checked this one and there is nothing to it. Some reports even attempted to measure the reduction as about 20c.

One of the bigger reasons why it can't happen is next year's congressional elections—if it were going to happen at all. The Administration would look pretty silly going into next fall's campaign on a reduced support announcement after having just raised supports the year before.

Still another reason why not: The Administration has still more gimmicks up its sleeve for increasing the demand for soybeans and their products.

Agriculture Secretary Freeman will be the first to leave the new cabinet—

implication being this would be welcome at the White House. Depending on what the new Secretary's farm policy philosophy means to you, you will want to know the answer to this one.

Again—nothing to it. The rumor brings us back to former Agriculture Secretary Benson's first year. He was fired in the press almost every year after that, but stayed on the full 8 years. If Freeman leaves—and there is no sign of it just now—it will be because he wants to and the White House will be the first to regret it.

**USDA budget will be cut drastically next year.** This one suggests big program cuts—research, ACP payments, and the rest.

Fact is—budget cutters would like to slice into government budget all the way across the board. But Defense, which includes big use of food as a cold-war weapon, calls for bigger budget than ever. USDA can pare down some, but most of USDA appropriations are approved by Congress to pay the expenses of programs Congress itself wants. Look for small shavings of some programs, that's all.

**Administration is on pins and needles over the big 75-million-bushel soybean carryover coming up.** Answer: If officials are on pins and needles



By **GEORGE PETER**

Washington correspondent for the Soybean Digest

we never saw people looking so comfortable.

And there is a reason. The recently talked-up slowdown in exports failed to show. Beans have been leaving the country 5 million bushels to date higher than last year—10 million more than 2 years ago. USDA expects to keep up this record.

**New USDA storage costs survey** may mean a new trade versus government scrap over a proposal to lower rates paid for CCC storage under Uniform Grain Storage Agreement. The story: It *could*, but officials are not out after a cut with blood in their eyes. If they are attacked again in the public press over huge storage payments, some of which naturally will look big because the more responsible commercial storage houses are big-space operations, officials want to be able to say they have made a recent check on rates and costs.

**What Freeman wants next.** It is by no means definite yet that he will try for it next year, but it is pretty definite that he now knows what he wants next as a curb on surplus grain production. It is a combined wheat-feed grain program in which the grains would be treated almost interchangeably, depending on whether the farmer wanted to produce wheat for feed or human use.

It's a "supply management" idea. Soybeans are not involved, except indirectly. If enough cutback of the oversupply grains were effected and demand for soybeans is sufficient, a certain portion of such acreage could be planted to soybeans without losing the benefits of the cutback incentives.

Otherwise, you might describe the program as an effort to gear feed grain production (including wheat as feed) and wheat production (as human food) to U. S. human, livestock and poultry needs. Wheat support would be reduced to relate its feed value to corn. When wheat sold for human needs, the producers would get a premium in certificates to make

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Christmas"

12 times a year



to your friends . . . customers . . . employees . . . or neighbors with a gift subscription to **THE SOYBEAN DIGEST**. It's a gift they will remember and appreciate.

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**THE SOYBEAN DIGEST .... HUDSON, IOWA**

up the difference. Supports for feed grains would remain about the same as now, but there would be payments and other incentives to compensate further reduction in acreage which would be called for.

It is a tossup yet as to which changes in farm programs Freeman will call for first the coming session. This will depend on priority as estimated at the time and how much he thinks he can get. It is definite, however—he won't toss another omnibus bill at Congress. The strategy the past year was to slug Congress hard. The new approach will be commodity-by-commodity—hence the uncertainty over what will come first.

To demolish some other talk—USDA is definitely not thinking at this point about production controls on soybeans. But such controls are a possibility in the near future. Unfortunately, it seems this prospect approaches more rapidly as demand and a good price for the beans approach an eventual leveling off at some point.

When—and if—this happens, either producers will have to police themselves or the government would have to clamp on controls as a condition for price support.

## Record High Protein Feed Supply in Prospect 1961-62

THE TOTAL tonnage of high-protein feeds available for feeding in 1961-62 is expected to be a little larger than in 1960-61 when a record 15.5 million tons (soybean meal equivalent) were available, according to the U. S. Department of Agriculture. Even with a continuation of heavy oil meal exports, the quantity of high-protein feeds available for feeding may reach a record high of around 16.1 million tons. The number of high-protein feed-consuming animal units is expected to be slightly larger in 1961-62 and protein feed supplies per animal unit will probably increase to a little above the 1960-61 record of 293 pounds per animal unit.

The total supply of oilseed cake and meal for 1961-62 is expected to be about 4% larger than the 12.8 million ton supply in 1960-61.

Exports of oilseed meals are likely to continue large in 1961-62 as a result of the big domestic supplies and prospects for heavier shipments to Canada and Japan. Exports of oilseed meals in 1960-61 totaled 668,000 tons, 22%

smaller than in 1959-60, but substantially above most other recent years.

As in most recent years, changes in

the high-protein feed supply are due largely to changes in the supply of soybean meal.

## — MARKET STREET —

We invite the readers of THE SOYBEAN DIGEST to use MARKET STREET for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here. Rate 10c per word per issue. Minimum insertion \$2.00.

**WANTED—SCREW CONVEYOR, STEEL** boxes, covers, bearings, hangers, etc. Selma Soybean Corp., Selma, N. C.

**WE MANUFACTURE STEEL ELEVATOR** legs, screw conveyors, pit screws, valves, elbows, piping, collectors, enclosed distributors, etc. Write for catalog and prices. Creamer Sheet Metal Products, London, Ohio.

**RIVER SITE ELEVATOR LOCATION FOR** sale or trade. Ideal location for elevator, in terminal and switching limits of Kansas City. Engineering-borings complete. Opportunity for good location and low-cost operation. Write Ed Payton, Westboro, Mo.

**PRODUCING ONE VARIETY OF MISSISSIPPI** certified Rebel soybean. Come see or order seed early. Bard Selden, Tunica, Miss.

**FOR SALE—RAYMOND FLASH DRYING** system with cooling stage. Dried 20,000 lb./hr. soybean supplement. Never used. Best Equipment Co., 1737 W. Howard St., Chicago 26, Ill., Ambassador 2-1452.

**FISCHBEIN BAG SEWING MACHINES,** thread, parts, accessories, illustrated brochures. Colonial Bag Co., 67 Auburn St., Chelsea 50, Mass. Turner 4-6090.

**FOR SALE—HABCO 400 GRAIN DRIER** \$2,700 less 7.5 hp motor. 1958 model has dried less than 30,000 bushels. Warren Grain & Lumber Co., Emerson, Nebr.

**FOR SALE—RAYMOND MILL, MIXERS,** shakers, centrifugals, blenders, heat exchangers, Sweetland presses, #2 Simpson muller, sewing machines, valve packers, and miscellaneous other equipment too numerous to list. What do you need? American Maize Products Co., Roby, Ind. Attn: Mr. J. J. McCabe.

**FOR SALE—RICHARDSON 100-LB. MEAL** scale. Union Special sewing machines. 14 x 42 flaking or crimping roll. Screw conveyors with augers. Ray L. Jones, 1923 Hayseleton Drive, Jefferson City, Mo.

**FOR SALE—TWO-PAIR HIGH ALL METAL** cracking rolls, size 9 x 30. Ray L. Jones, 1923 Hayseleton Drive, Jefferson City, Mo.

**CHAROLAIS BULLS. COME SEE THEM** or write Bard Selden, Tunica, Miss.

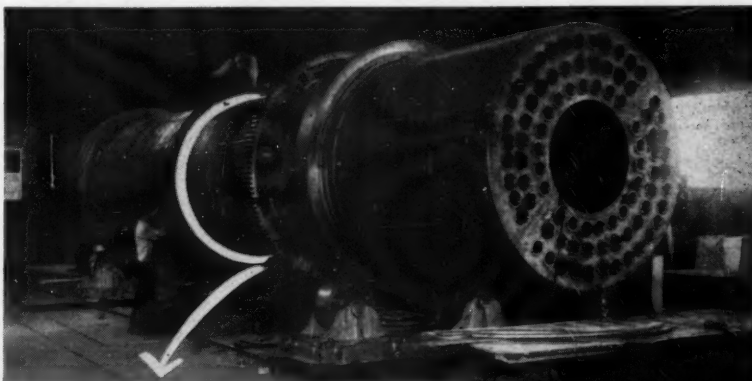
**MISSISSIPPI CERTIFIED GULFROSE SEED** rice. Come see. Order seed early. Bard Selden, Tunica, Miss.

**BEAN STORAGE TANKS—11½¢, 13½¢, 15¢** per bushel. New patents make possible all steel complete at lowest cost. Write Allied Tank, Westboro, Mo., ph. 83, or 1207 Commerce Trust Bldg., Kansas City, Mo., HA 1-0282.

**ONE REBUILT 15-BUSHEL RICHARDSON** automatic grain scale, \$900. Replaced with track scale. Write Carter Feed Mills, Odessa, Mo.

**MACHINERY FOR SALE—V. D. ANDERSON** 3-ft. diameter by 15-ft. long steam jacketed cooker/drier. 24-inch single runner head attrition mill. All equipment is in excellent condition. Southern States Feed Corp., P. O. Box 227, Forest Park, Georgia.

**SEWING MACHINES—ALL TYPES CONVEYORS,** swinging units, portables. New and used. Fischbein, Union Special, Minneapolis. Complete rebuilding and service. McCullough & Co., 8205 Paradise Lane, Kansas City 34, Mo., South 1-2857.



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"DAVENPORT" Engineers have designed equipment to be dismantled before shipment, taken into building through limited space, and reassemble in place ready for operation. This Davenport innovation can save you costly building alterations, or expensive building additions.

Our Engineers will be happy to discuss your drying problems with you. Ask for our Catalog D and about our Pilot Plant Service. For quick reference, see your Chemical Engineering Catalog.

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PRESSING — DRYING  
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Presses  
ROTARY DRYERS  
Steam Tube, Hot Air  
and Direct Fire  
Atmospheric  
DRUM DRYERS  
ROTARY COOLERS  
Water and Air



## IN THE MARKETS

**EXPORTS.** Preliminary data on U. S. exports of soybeans, soybean and cottonseed oils, and soybean and cottonseed cakes and meals, for September 1961, with comparable data for September 1960 and cumulative totals for October-September in the marketing years 1959-60 and 1960-61, from USDA's Foreign Agricultural Service.

	Unit	September		October-September <sup>1</sup>	
		1960 <sup>1</sup>	1961	1959-60	1960-61
Soybeans	bu.	8,163,848	3,556,907	141,380,907	130,063,410
Soybean oil:					
Crude	lb.	8,671,958	20,279,973	608,067,323	423,244,926
Refined but not further processed	lb.	2,245,441	1,626,932	120,237,259	39,268,877
Refined, deodorized and hydrogenated	lb.	19,407,445	9,715,415	224,449,023	237,290,847
Cottonseed oil:					
Crude	lb.	7,354,960	1,976,465	289,821,656	186,352,655
Refined but not further processed	lb.	1,188,772	9,880,626	167,389,238	127,137,366
Refined, deodorized and hydrogenated	lb.	6,251,273	1,902,244	46,102,488	42,286,546
Cottonseed cake and meal	s.t.	9,248	2,080	140,196	46,008
Soybean cake and meal	s.t.	47,767	31,049	648,660	589,737

<sup>1</sup> Includes any revisions made by the Bureau of the Census.

### Exports under Title I, Public Law 480, by commodity,

	July-October 1961		July - October 1961	
	October 1961		October 1961	
	Unit	Metric tons	Unit	Metric tons
Cottonseed oil	lb.	500	equivalent tons	4,817
Soybean oil	lb.	2,217	equivalent tons	10,619,000
Foreign Agricultural Service, U. S. Department of Agriculture.				

### Soybeans: Carlot, cargo and trucklot inspected receipts, September 1961 with comparisons (1,000 bu.)

September 1961		July-September 1961	
Carlot	13,671	Carlot	25,016
Cargo	1,461	Cargo	6,802
Trucklot	2,161	Trucklot	3,348
Total	17,293	Total	35,166
September 1960		July-September 1960	
Carlot	23,474	Carlot	51,255
Cargo	4,626	Cargo	16,686
Trucklot	3,003	Trucklot	10,343
Total	31,103	Total	78,284

Carlots converted to bushels at 1,800.

### Soybeans: Inspections for export by coastal areas and country of destination, October 1961 (1,000 bu.)

Lake Ports		Gulf	
Canada	4,540	Venezuela	150
Norway	226	Denmark	1,082
Denmark	434	Ireland	3,803
Netherlands	224	Belgium	2,252
France	112	West Germany	1,426
West Germany	329	Italy	441
Other	87	Israel	549
Subtotal	5,952	Japan	5,905
Atlantic		Morocco	
Netherlands	33	Other	91
West Germany	114	Subtotal	15,848
Other	452	Grand total	22,399
Subtotal	599	Total Jan.-Oct. 1961	96,606
		Total Jan.-Oct. 1960	99,745

Based on weekly reports of inspections for export by licensed inspectors and does not include rail or truck movement to Canada or Mexico. In some cases, the ultimate destination of the soybeans exported is not shown on the inspection reports. Therefore, the quantity for each country may vary from official Census data which are based on custom declarations. Agricultural Marketing Service.

### Soybeans: U. S. exports by country of destination, October-September 1960-61 and 1959-60 (1,000 bu.)

1960-61		1959-60		1960-61		1959-60	
Canada	18,663	15,762	France	1,624	4,517		
Mexico	15	6	Israel	5,196	6,080		
Cuba	162	954	Korea	1,014	1,301		
Venezuela	368	110	Japan	38,305	40,177		
United Kingdom	4,262	3,908	Taiwan				
Norway	2,499	2,150	(Formosa)	6,483	5,281		
Denmark	5,417	8,663	Morocco	580	419		
Netherlands	18,951	26,328	Sweden	1	8		
Belgium and Luxembourg	4,428	4,211	Switzerland	525	903		
West Germany	15,596	15,300	Nansei and				
Poland	363		Nanpo Is.	179	403		
Spain	1	53	Czechoslovakia	778			
Italy	4,371	4,031	Other	283	4816		
			Total	130,063	141,381		

<sup>1</sup> Less than 500 bushels. Bureau of the Census.

### Soybeans: Inspections for export by ports and areas, October 1961 (1,000 bu.)

Lake Ports		Gulf	
Chicago	1,185	Destrehan	2,725
Huron	100	Mobile	1,600
Toledo	4,636	New Orleans	7,478
Milwaukee	31	Port Allen	4,045
Subtotal	5,952	Subtotal	15,848
Atlantic		Totals	
Philadelphia	115	October	22,399
Baltimore	465	Jan.-Oct. 1961	96,606
Norfolk	19	Jan.-Oct. 1960	99,745
Subtotal	599		

Based on weekly reports of inspections for export by licensed inspectors and does not include rail and truck movement to Canada or Mexico. Agricultural Marketing Service, U. S. Department of Agriculture.



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## IN THE MARKETS

**Soybeans: Trucklot inspected receipts and shipments at selected markets, September 1961 and 1960 (1,000 bu.)**

	1961	1960		1961	1960
<b>Receipts</b>			<b>Shipments</b>		
Norfolk	25	76	Alton, Ill.	156	503
Richmond	3	2	Toledo	36	191
Raleigh	---	---	Philadelphia	1	2
Chicago	844	363	Other	143	209
Duluth-Superior	1	189	Total	2,161	3,003
Kansas City	1	171			
Los Angeles	2	6	Decatur, Ala.	---	1
Louisville	3	3	Port Allen	---	1
Minneapolis	622	872	Sheffield, Ala.	1	---
Decatur, Ala.	---	3	Minneapolis	---	3
Omaha	---	10	Raleigh	---	1
Decatur, Ill.	324	402	Richmond	---	2
			Other	5	1
			Total	6	9

Agricultural Marketing Service.

**PROCESSING OPERATIONS.** Reported by Bureau of the Census for September and October.

**Primary products except crude oil at crude oil mill locations: Production, shipments and transfers, and stock, October 1961-September 1961 (1,000 short tons)**

	<b>Production</b>		<b>Shipments and transfers</b>		<b>Stocks end of month</b>	
	Oct. 1961	Sep. 1961	Oct. 1961	Sep. 1961	Oct. 31, 1961	Sep. 30, 1961
Soybeans:						
Cake and meal	832.4	529.7	842.2	628.9	62.1	71.9
Millfeed (hull meal)	14.2	12.9	14.5	16.0	5.3	5.6

**Soybeans: Net receipts, crushings, and stocks at oil mills, by states, October 1961-September 1961 (1,000 tons)**

	<b>Net receipts at mills</b>		<b>Crushed or used</b>		<b>Stocks at mills</b>	
	Oct. 1961	Sep. 1961	Oct. 1961	Sep. 1961	Oct. 31, 1961	Sep. 30, 1961
U. S.	3,274.4	570.1	1,086.7	688.6	2,470.4	282.7
Arkansas	268.4	(2)	30.4	(2)	242.5	4.5
Illinois	983.2	288.3	364.3	227.0	757.6	138.7
Indiana	439.2	(2)	110.2	67.0	(2)	(2)
Iowa	358.1	64.5	179.8	111.9	204.6	26.3
Minnesota	139.2	34.2	87.5	56.4	59.8	8.1
Mississippi	121.8	(2)	27.2	(2)	99.2	4.6
Missouri	(2)	(2)	(2)	(2)	(2)	(2)
Nebraska	(2)	(2)	(2)	(2)	(2)	(2)
North Carolina	(2)	0.8	(2)	13.8	8.2	2.6
Ohio	248.8	47.1	81.3	61.7	202.3	34.8
Tennessee	181.9	14.7	67.7	53.5	117.6	3.4
All other	533.8	120.5	138.3	97.3	778.6	59.7

Note: Detail figures may not add to totals because of independent rounding. <sup>1</sup> Net receipts for each state are derived from the quantity of beans crushed and net change in stocks. <sup>2</sup> Included in "All other" to avoid disclosure of figures for individual companies.

**Soybean products: Production and stocks at oil mill locations, by states, October 1961-September 1961**

	<b>Crude oil (millions of pounds)</b>			<b>Cake and meal (thousands of tons)<sup>1</sup></b>		
	Oct. 1961	Sep. 1961	Oct. 31, 1961	Oct. 1961	Sep. 1961	Oct. 31, 1961
U. S.	393.9	253.3	105.6	94.0	846.6	542.6
Arkansas	11.5	(2)	6.7	(2)	23.8	(2)
Illinois	132.9	83.1	31.1	32.4	275.0	171.0
Indiana	39.7	24.4	(2)	(2)	86.5	54.3
Iowa	63.8	40.1	17.3	12.9	144.1	92.2
Minnesota	31.2	20.3	4.6	5.8	68.8	44.3
Mississippi	10.2	(2)	2.2	(2)	20.8	(2)
Missouri	(2)	(2)	1.5	(2)	(2)	(2)
Nebraska	(2)	(2)	(2)	(2)	(2)	(2)
N. Carolina	(2)	4.6	(2)	(2)	10.4	(2)
Ohio	28.7	22.4	6.3	3.2	64.7	49.2
Tennessee	25.5	19.9	10.1	5.6	53.7	42.1
All other	50.4	38.5	25.8	34.1	109.2	79.1

<sup>1</sup> Includes mill feed (hull meal). <sup>2</sup> Included in "All other" to avoid disclosure of figures for individual companies. Note: Detail figures may not add to totals because of independent rounding.

**MELLORINE.** The October production of mellorine and other frozen desserts made with fats and oils other than milkfat was estimated at 3,735,000 gallons, by the U. S. Department of Agriculture. This was 11% more than the October output a year ago and 35% greater than the 1955-59 average for the month. The January-October total this year was 9% greater than in the first 10 months of 1960 and 34% above the average.

**Production of "mellorine-type" frozen desserts, United States 1961**

	1955-59 average <sup>1</sup>	1959 <sup>2</sup>	1960 <sup>3</sup>	Estimated 1961	Change from: 1955-59 av. 1960
					Percent
January	2,012	2,254	2,536	2,850	+42 +12
February	2,188	2,444	2,912	3,100	+42 +6
March	2,805	3,338	3,452	4,140	+48 +20
April	3,076	3,601	3,824	4,055	+32 +6
May	3,723	4,146	4,343	4,985	+34 +15
June	4,026	4,825	5,329	5,390	+34 +1
July	4,324	5,007	4,911	5,285	+22 +8
August	4,176	4,709	5,109	5,695	+36 +11
September	3,393	4,140	4,367	4,410	+30 +1
October	2,765	3,191	3,380	3,735	+35 +11
10-month total	32,488	37,655	40,163	43,645	+34 +9

<sup>1</sup> From enumerations.

**FACTORY USE VEGETABLE OILS** for August and September 1961. Reported by Bureau of the Census.

**Selected edible oils: Production, consumption, and factory and warehouse stocks (million lbs.)**

	<b>Cottonseed oil</b>		<b>Soybean oil</b>	
	Sep. 1961	Aug. 1961	Sep. 1961	Aug. 1961
Production:				
Crude oils	109.4	48.9	253.3	333.9
Refined oils (once refined) <sup>1</sup>	63.2	47.8	284.0	291.9
Consumption in refining <sup>1</sup>	68.3	50.4	296.7	303.9
Consumption in selected edible and inedible products, total <sup>2</sup>	90.3	105.4	292.5	280.3
Consumption in edible products, total	89.8	104.9	274.6	263.5
Baking or frying fats	26.4	28.2	98.5	103.6
Salad or cooking oil	52.5	67.3	83.3	78.6
Margarine	10.0	8.5	90.6	79.6
Other edible products <sup>3</sup>	0.9	0.9	2.2	1.7
Stocks, end of month, total <sup>4</sup>	170.4	182.8	677.2	765.6
Crude oils	53.7	25.4	463.8	537.3
Refined oils	116.7	157.4	213.4	228.3

<sup>1</sup> Production of refined oils covers only once-refined oil. Degummed soybean oil is reported as crude oil. <sup>2</sup> Includes hydrogenated fats "in process." (e.g. refined cottonseed includes stocks of stearin). <sup>3</sup> Includes confectioners fats.

**Consumption of vegetable oil foods in fatty acids (million lbs.)**

	<b>Total consumption<sup>1</sup></b>		<b>Used in fatty acids</b>		<b>used in fatty acids</b>	
	Sep. 1961	Jan.-Sept. 1961	Sep. 1961	Jan.-Sept. 1961	Sep. 1961	Jan.-Sept. 1961
1961 1960	1961 1960	1961 1960	1961 1960	1961 1960	1961 1960	1961 1960
10.9 11.7	100.5 99.2	7.4 6.6	61.5 60.0	68% 56%	61% 60%	60%

<sup>1</sup> Excluding amounts consumed in refining. U. S. Bureau of the Census.

**SUPPLY, DISTRIBUTION** of soybeans for the 1958-61 crop years, from Agricultural Marketing Service (1,000 bushels).

	1961-62	1960-61	1959-60	1958-59
Carryover, Oct. 1	5,990	23,218	62,117	21,083
Production	700,835	558,771	532,899	580,250
Total supply <sup>1</sup>	706,825	581,989	595,016	601,333
Farm use, including seed for season	35,000	46,000	37,500	28,000
Quantity remaining for processing, export, or carryover	671,825	535,989	557,516	573,333
Disappearance through Oct. 31:				
Crushed for oil or processed <sup>2</sup>	36,223	35,637	35,340	33,470
Exported	20,000	14,050	12,088	12,053
Total	56,223	49,687	47,428	45,523

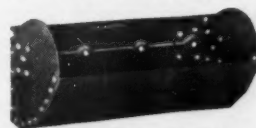
Balance on Nov. 1 for processing, export, or carryover: 615,602 486,302 510,088 527,810  
<sup>1</sup> Imports not included because negligible. <sup>2</sup> No allowance is made for new-crop crushings prior to Oct. 1. <sup>3</sup> Estimated

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**PRICE SUPPORT.** Total of 1961-crop soybeans, put under support through October 1961 compared to 1960-crop total a year earlier, reported by U. S. Department of Agriculture (bushels).

Warehouse-stored loans	Farm-stored loans	Purchase agreements	Total put under support through	Total put under support through
			Oct. 31, 1961	Oct. 31, 1960
14,846,641	1,194,191	72,080	16,112,912	3,636,905

Repayments of 1961-crop support loans on soybeans through October totaled 759 bushels.

**Soybeans: Amount put under price support by states, Oct. 31, 1961 (bushels)**

	Warehouse	Farm	Purchase agreements	Total
Arkansas	543,382	4,324	-----	547,706
Georgia	6,123	-----	-----	6,123
Illinois	3,647,330	9,434	25,369	3,682,133
Indiana	738,875	97,110	10,213	846,198
Iowa	1,959,189	538,641	13,603	2,511,433
Kansas	348,005	53,078	2,500	403,583
Kentucky	43,094	9,226	-----	52,320
Louisiana	6,243	-----	-----	6,243
Michigan	34,818	-----	4,570	39,388
Minnesota	3,809,878	203,477	2,184	4,015,539
Mississippi	131,292	6,799	-----	138,091
Missouri	1,983,226	92,374	2,800	2,078,400
Nebraska	309,191	-----	2,040	311,231
North Carolina	723	-----	400	1,123
North Dakota	172,426	46,688	400	219,514
Ohio	821,750	124,701	5,501	951,952
Oklahoma	78,701	5,752	-----	84,453
South Carolina	28,939	-----	-----	28,939
South Dakota	46,113	2,587	-----	48,700
Tennessee	125,839	-----	2,500	128,339
Texas	10,429	-----	-----	10,429
Virginia	816	-----	-----	816
Wisconsin	3,849	-----	-----	3,849
Wyoming	3,590	-----	-----	3,590
Total	14,846,641	1,194,191	72,080	16,112,912

**PRICES.** Average price for soybeans received by farmers, effective parity, and support rates, reported by Agricultural Marketing Service (dollars per bushel).

Average farm price			Effective parity	Av. price as percent of parity	National average price support rate		
Oct. 15, 1961	Sept. 15, 1961	Oct. 15, 1960	Oct. 15, 1961	Oct. 15, 1961	1961 crop	1960 crop	1959 crop
2.20	2.24	1.94	2.89	76	2.30	1.85	1.85

Average farm and parity prices from crop reporting board.

**Soybean prices compared with market value of soybean oil and meal**

	Soybean oil		Soybean meal		Value of oil and meal from bushel of soybeans <sup>1</sup>	Market price No. 1 yellow soybeans <sup>1</sup>	Spread between soybean price and value of oil and meal
	Average price at crushing plant	Value from bu. of soybeans <sup>1</sup>	Bulk price at Decatur	Value from bu. of soybeans <sup>1</sup>	Dollars	Dollars	Dollars
	Cts. per pound	Dollars	Dollars per ton	Dollars	Dollars	Dollars	Cents
Oct. 1961	10.7	1.18	54.00	1.27	2.45	2.32	13
Sept. 1961	10.5	1.16	59.60	1.40	2.56	2.27	29
Aug. 1961	10.8	1.19	68.90	1.62	2.81	2.63	18
July 1961	10.9	1.20	65.00	1.53	2.73	2.59	14
June 1961	11.4	1.25	63.85	1.50	2.75	2.73	2
Oct. 1960	9.3	1.02	48.95	1.15	2.17	2.04	13

<sup>1</sup> Based on assumption that a bushel of soybeans yields 11 pounds of oil and 47 pounds of meal. \* New crop. This table is for statistical comparison only. It does not reflect actual operating margins since prices are simple averages and do not take into account location differentials or actual purchases and sales of soybeans, soybean oil or soybean meal. Agricultural Marketing Service.



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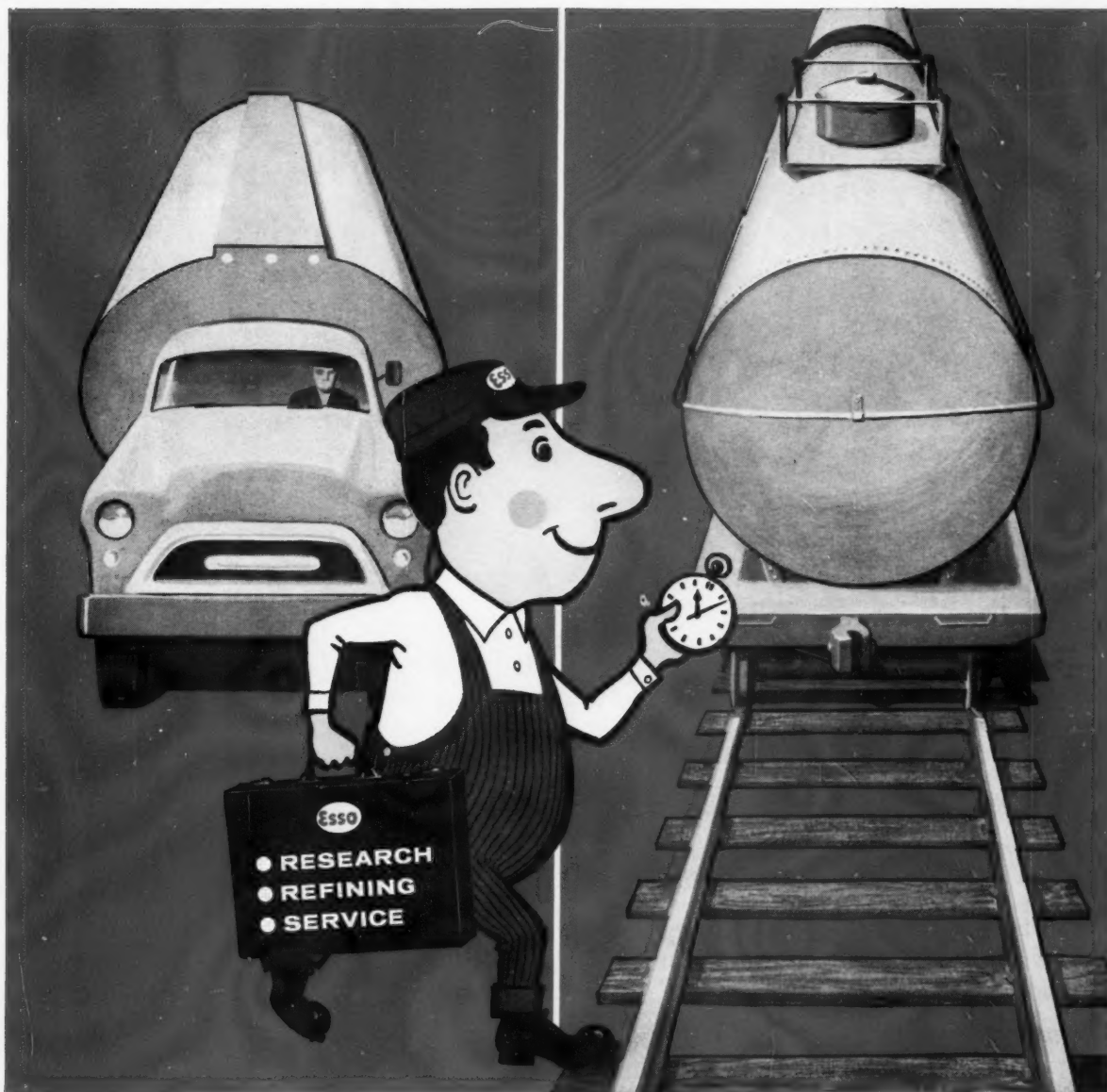
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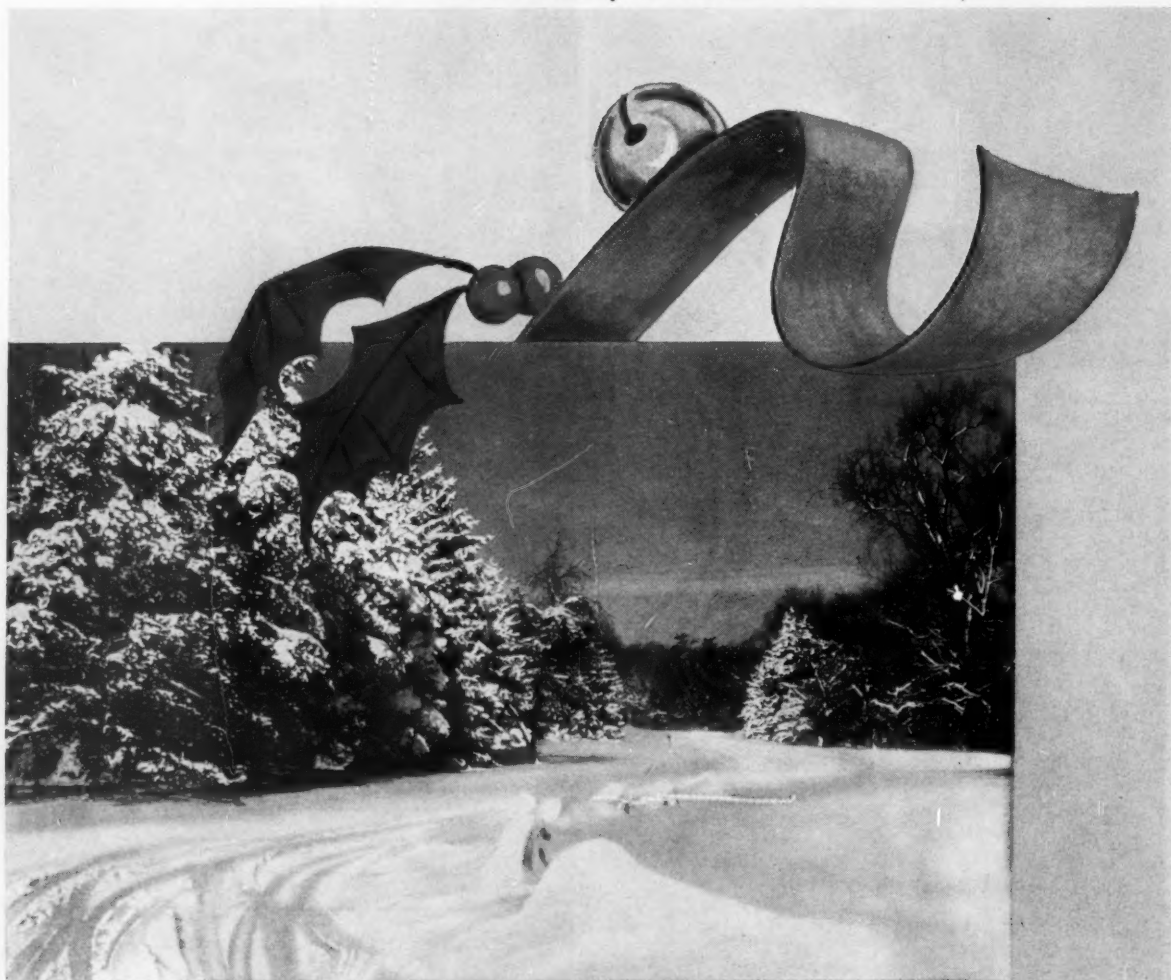
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